

#3



SEQUENCE LISTING

<110> MARRICK, JAMES W.  
WYCOFF, KEITH L.

<120> NOVEL IMMUNOADHESINS FOR TREATING AND PREVENTING VIRAL  
AND BACTERIAL DISEASES

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<210> 10

<211> 22

<212> PRT

<213> Phaseolus vulgaris

<400> 10

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<210> 11

<211> 508

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Protein coding  
region of the plasmid pSHuJ

<400> 11

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atctgtgatg aagacagtgc tacagagacc tgctacactt atgacagaaa caagtgctac 420

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<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Protein coding  
region of plasmid pSHuSC

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<211> 4465  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence:  
Expression-type plasmid pBMSP-1

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<221> modified\_base

<222> (2150)

<223> a, c, t or g

<220>

<221> modified\_base

<222> (2214)..(2215)

<223> a, c, t or g

<400> 13

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<210> 14

<211> 8074

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:  
Expression-type plasmid pBMSP-1spJSC

<220>

<221> modified\_base

<222> (2315)

<223> a, c, t or g

<400> 14

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 <211> 1062  
 <212> DNA  
 <213> Homo sapiens

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 <211> 353  
 <212> PRT  
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<400> 16  
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 Thr Thr Ser Ser Gln Leu Thr Leu Pro Ala Thr Gln Cys Leu Ala Gly  
 65 70 75 80  
 Lys Ser Val Thr Cys His Val Lys His Tyr Thr Asn Pro Ser Gln Asp  
 85 90 95  
 Val Thr Val Pro Cys Pro Val Pro Ser Thr Pro Pro Thr Pro Ser Pro  
 100 105 110

Ser Thr Pro Pro Thr Pro Ser Pro Ser Cys Cys His Pro Arg Leu Ser  
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 Leu His Arg Pro Ala Leu Glu Asp Leu Leu Leu Gly Ser Glu Ala Asn  
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 145 150 155 160  
 Thr Trp Thr Pro Ser Ser Gly Lys Ser Ala Val Gln Gly Pro Pro Glu  
 165 170 175  
 Arg Asp Leu Cys Gly Cys Tyr Ser Val Ser Ser Val Leu Pro Gly Cys  
 180 185 190  
 Ala Glu Pro Trp Asn His Gly Lys Thr Phe Thr Cys Thr Ala Ala Tyr  
 195 200 205  
 Pro Glu Ser Lys Thr Pro Leu Thr Ala Thr Leu Ser Lys Ser Gly Asn  
 210 215 220  
 Thr Phe Arg Pro Glu Val His Leu Leu Pro Pro Pro Ser Glu Glu Leu  
 225 230 235 240  
 Ala Leu Asn Glu Leu Val Thr Leu Thr Cys Leu Ala Arg Gly Phe Ser  
 245 250 255  
 Pro Lys Asp Val Leu Val Arg Trp Leu Gln Gly Ser Gln Glu Leu Pro  
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 Arg Glu Lys Tyr Leu Thr Trp Ala Ser Arg Gln Glu Pro Ser Gln Gly  
 275 280 285  
 Thr Thr Thr Phe Ala Val Thr Ser Ile Leu Arg Val Ala Ala Glu Asp  
 290 295 300  
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 305 310 315 320  
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<210> 17

<211> 1023

<212> DNA

<213> Homo sapiens

<400> 17

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<210> 18

<211> 340

<212> PRT

<213> Homo sapiens

<400> 18

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Pro Gln Glu Pro Leu Ser Val Thr Trp Ser Glu Ser Gly Gln Asn Val
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Thr Ala Arg Asn Phe Pro Pro Ser Gln Asp Ala Ser Gly Asp Leu Tyr
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Thr Thr Ser Ser Gln Leu Thr Leu Pro Ala Thr Gln Cys Pro Asp Gly
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Lys Ser Val Thr Cys His Val Lys His Tyr Thr Asn Pro Ser Gln Asp
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Val Thr Val Pro Cys Pro Val Pro Pro Pro Pro Cys Cys His Pro
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Arg Leu Ser Leu His Arg Pro Ala Leu Glu Asp Leu Leu Leu Gly Ser
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Glu Ala Asn Leu Thr Cys Thr Leu Thr Gly Leu Arg Asp Ala Ser Gly
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Ala Thr Phe Thr Trp Thr Pro Ser Ser Gly Lys Ser Ala Val Gln Gly
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Pro Pro Glu Arg Asp Leu Cys Gly Cys Tyr Ser Val Ser Ser Val Leu
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Pro Gly Cys Ala Gln Pro Trp Asn His Gly Glu Thr Phe Thr Cys Thr
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Glu Glu Leu Ala Leu Asn Glu Leu Val Thr Leu Thr Cys Leu Ala Arg  
 225 230 235 240

Gly Phe Ser Pro Lys Asp Val Leu Val Arg Trp Leu Gln Gly Ser Gln  
 245 250 255

Glu Leu Pro Arg Glu Lys Tyr Leu Thr Trp Ala Ser Arg Gln Glu Pro  
 260 265 270

Ser Gln Gly Thr Thr Thr Phe Ala Val Thr Ser Ile Leu Arg Val Ala  
 275 280 285

Ala Glu Asp Trp Lys Lys Gly Asp Thr Phe Ser Cys Met Val Gly His  
 290 295 300

Glu Ala Leu Pro Leu Ala Phe Thr Gln Lys Thr Ile Asp Arg Leu Ala  
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Gly Thr Cys Tyr  
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&lt;210&gt; 19

&lt;211&gt; 993

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 19

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<210> 20  
 <211> 330  
 <212> PRT  
 <213> Homo sapiens

<400> 20

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			20					25					30		
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65					70					75					80
Tyr	Ile	Cys	Asn	Val	Asn	His	Lys	Pro	Ser	Asn	Thr	Lys	Val	Asp	Lys
			85						90					95	
Lys	Val	Glu	Pro	Lys	Ser	Cys	Asp	Lys	Thr	His	Thr	Cys	Pro	Pro	Cys
			100					105					110		
Pro	Ala	Pro	Glu	Leu	Leu	Gly	Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro
		115					120					125			
Lys	Pro	Lys	Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys
	130					135					140				
Val	Val	Val	Asp	Val	Ser	His	Glu	Asp	Pro	Glu	Val	Lys	Phe	Asn	Trp
145					150					155					160
Tyr	Val	Asp	Gly	Val	Glu	Val	His	Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu
			165						170					175	
Glu	Gln	Tyr	Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu
			180					185					190		
His	Gln	Asp	Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn
		195					200					205			
Lys	Ala	Leu	Pro	Ala	Pro	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly
	210					215					220				
Gln	Pro	Arg	Glu	Pro	Gln	Val	Tyr	Thr	Leu	Pro	Pro	Ser	Arg	Asp	Glu
225					230					235					240
Leu	Thr	Lys	Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr
			245						250					255	
Pro	Ser	Asp	Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn
			260					265					270		

Asn Tyr Lys Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe  
275 280 285

Leu Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn  
290 295 300

Val Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr  
305 310 315 320

Gln Lys Ser Leu Ser Leu Ser Pro Gly Lys  
325 330

<210> 21

<211> 978

<212> DNA

<213> Homo sapiens

<400> 21

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agcacagccg ccctgggctg cctgggtcaag gactacttcc ccgaaccggg gacgggtgtcg 120
tggaactcag gcgctctgac cagcggcgctg cacaccttcc cagctgtcct acagtcctca 180
ggactctact ccctcagcag cgtgggtgacc gtgccctcca gcaacttcgg caccagacc 240
tacacctgca acgtagatca caagcccagc aacaccaagg tggacaagac agttgagcgc 300
aaatgttggtg tcgagtgccc accgtgcccc gcaccacctg tggcaggacc gtcagtcttc 360
ctcttcccc caaaacccaa ggacacctc atgatctccc ggacctctga ggtcacgtgc 420
gtgggtgggtg acgtgagcca cgaagacccc gaggtccagt tcaactggta cgtggacggc 480
gtggaggtgc ataatgccaa gacaaagcca cgggaggagc agttcaacag cacgttccgt 540
gtggtcagcg tcctcaccgt tgtgcaccag gactggctga acggcaagga gtacaagtgc 600
aaggtctcca acaaaggcct ccagcccc atcgagaaaa ccatctccaa aaccaaaggg 660
cagccccgag aaccacaggt gtacacctg ccccatccc gggaggagat gaccaagaac 720
caggtcagcc tgacctgcct ggtcaaaggc ttctacccca gcgacatcgc cgtggagtgg 780
gagagcaatg ggcagccgga gaacaactac aagaccacac ctcccatgct ggactccgac 840
ggctccttct tcctctacag caagctcacc gtggacaaga gcaggtggca gcaggggaac 900
gtcttctcat gctccgtgat gcatgaggct ctgcacaacc actacacgca gaagagcctc 960
tcctgtctc cgggtaaa 978
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<210> 22

<211> 326

<212> PRT

<213> Homo sapiens

<400> 22

Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg  
1 5 10 15

Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr  
20 25 30

Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser  
35 40 45

Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser  
50 55 60

Leu Ser Ser Val Val Thr Val Pro Ser Ser Asn Phe Gly Thr Gln Thr  
65 70 75 80

Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys  
                             85                            90                            95  
 Thr Val Glu Arg Lys Cys Cys Val Glu Cys Pro Pro Cys Pro Ala Pro  
                             100                            105                            110  
 Pro Val Ala Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp  
                             115                            120                            125  
 Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp  
                             130                            135                            140  
 Val Ser His Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly  
                             145                            150                            155                            160  
 Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn  
                             165                            170                            175  
 Ser Thr Phe Arg Val Val Ser Val Leu Thr Val Val His Gln Asp Trp  
                             180                            185                            190  
 Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro  
                             195                            200                            205  
 Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr Lys Gly Gln Pro Arg Glu  
                             210                            215                            220  
 Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met Thr Lys Asn  
                             225                            230                            235                            240  
 Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile  
                             245                            250                            255  
 Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr  
                             260                            265                            270  
 Thr Pro Pro Met Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys  
                             275                            280                            285  
 Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys  
                             290                            295                            300  
 Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu  
                             305                            310                            315                            320  
 Ser Leu Ser Pro Gly Lys  
                             325

<210> 23

<211> 1134

<212> DNA

<213> Homo sapiens

<400> 23

gcttccacca agggcccatc ggtcttcccc ctggcgccct gctccaggag cacctctggg 60  
 ggcacagcgg ccctgggctg cctgggtcaag gactacttcc ccgaaccggt gacggtgtcg 120

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tggaactcag gcgccctgac cagcggcggtg cacaccttcc cggctgtcct acagtcctca 180
ggactctact ccctcagcag cgtggtgacc gtgccctcca gcagcttggg caccagagacc 240
tacacctgca acgtgaatca caagcccagc aacaccaagg tggacaagag agttgagctc 300
aaaacccccac ttggtgacac aactcacaca tgcccacggt gccagagacc caaatcttgt 360
gacacacctc ccccggtgcc cgggtgcccc gagcccaaat cttgtgacac acctccccc 420
tgcccacggt gccagagacc caaatcttgt gacacacctc ccccggtgcc aaggtgcccc 480
gcacctgaac tcctgggagg accgtcagtc ttctcttccc ccccaaaacc caaggatacc 540
cttatgattt cccggacccc tgaggtcacg tgcgtggtgg tggacgtgag ccacgaagac 600
cccaggtcc agttcaagt gtacgtggac ggcgtggagg tgcataatgc caagacaaag 660
ccgcgggagg agcagtacaa cagcacgttc cgtgtggtca gcgtcctcac cgtcctgcac 720
caggactggc tgaacggcaa ggagtacaag tgcaaggctc ccaacaaagc cctcccagcc 780
cccatcgaga aaaccatctc caaaacaaaa ggacagcccc gagaaccaca ggtgtacacc 840
ctgcccccat cccgggagga gatgaccaag aaccagggtc gcctgacctg cctggtcaaa 900
ggcttctacc ccagcgacat cgccgtggag tgggagagca gcgggcagcc ggagaacaac 960
tacaacacca cgctcccat gctggactcc gacggctcct tcttctcta cagcaagctc 1020
accgtggaca agagcagggt gcagcagggg aacatcttct catgctccgt gatgcatgag 1080
gctctgcaca accgcttcac gcagaagagc ctctccctgt ctccgggtaa atga 1134

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<210> 24

<211> 377

<212> PRT

<213> Homo sapiens

<400> 24

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Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg
  1             5             10             15

Ser Thr Ser Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr
          20             25             30

Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
          35             40             45

Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
  50             55             60

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr
  65             70             75             80

Tyr Thr Cys Asn Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys
          85             90             95

Arg Val Glu Leu Lys Thr Pro Leu Gly Asp Thr Thr His Thr Cys Pro
          100            105            110

Arg Cys Pro Glu Pro Lys Ser Cys Asp Thr Pro Pro Pro Cys Pro Arg
          115            120            125

Cys Pro Glu Pro Lys Ser Cys Asp Thr Pro Pro Pro Cys Pro Arg Cys
          130            135            140

Pro Glu Pro Lys Ser Cys Asp Thr Pro Pro Pro Cys Pro Arg Cys Pro
          145            150            155            160

Ala Pro Glu Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys
          165            170            175

```

Pro Lys Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val  
 180 185 190  
 Val Val Asp Val Ser His Glu Asp Pro Glu Val Gln Phe Lys Trp Tyr  
 195 200 205  
 Val Asp Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu  
 210 215 220  
 Gln Tyr Asn Ser Thr Phe Arg Val Val Ser Val Leu Thr Val Leu His  
 225 230 235 240  
 Gln Asp Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys  
 245 250 255  
 Ala Leu Pro Ala Pro Ile Glu Lys Thr Ile Ser Lys Thr Lys Gly Gln  
 260 265 270  
 Pro Arg Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Glu Glu Met  
 275 280 285  
 Thr Lys Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro  
 290 295 300  
 Ser Asp Ile Ala Val Glu Trp Glu Ser Ser Gly Gln Pro Glu Asn Asn  
 305 310 315 320  
 Tyr Asn Thr Thr Pro Pro Met Leu Asp Ser Asp Gly Ser Phe Phe Leu  
 325 330 335  
 Tyr Ser Lys Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Ile  
 340 345 350  
 Phe Ser Cys Ser Val Met His Glu Ala Leu His Asn Arg Phe Thr Gln  
 355 360 365  
 Lys Ser Leu Ser Leu Ser Pro Gly Lys  
 370 375

&lt;210&gt; 25

&lt;211&gt; 984

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 25

gcttccacca agggcccatc cgtcttcccc ctggcgccct gctccaggag cacctccgag 60  
 agcacagccg ccctgggctg cctggtcaag gactacttcc ccgaaccggt gacggtgtcg 120  
 tggaactcag gcgccctgac cagcggcgtg cacaccttcc cggetgtcct acagtcctca 180  
 ggactctact ccctcagcag cgtggtgacc gtgccctcca gcagcttggg cacgaagacc 240  
 tacacctgca acgtagatca caagcccagc aacaccaagg tggacaagag agttgagtc 300  
 aaatatggtc ccccatgccc atcatgcca gcacctgagt tctggggggg accatcagtc 360  
 ttctgttccc ccccaaaacc caaggacact ctcatgatct cccggacccc tgagggtcacg 420  
 tgcgtgggtg tggacgtgag ccaggaagac cccgaggtcc agttcaactg gtacgtggat 480  
 ggcgtggagg tgcataatgc caagacaaag ccgcgggagg agcagttcaa cagcacgtac 540  
 cgtgtgggtca gcgtcctcac cgtcctgcac caggactggc tgaacggcaa ggagtacaag 600  
 tgcaaggtct ccaacaaagg cctcccgtcc tccatcgaga aaaccatctc caaagccaaa 660  
 gggcagcccc gagagccaca ggtgtacacc ctgcccccat cccaggagga gatgaccaag 720

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aaccagggtca gcctgacctg cctgggtcaaa ggcttctacc ccagcgacat cgccgtggag 780
tgggagagca atgggcagcc ggagaacaac tacaagacca cgctcccgt gctggactcc 840
gacggctcct tcttctctta cagcaggcta accgtggaca agagcagggtg gcaggagggg 900
aatgtcttct catgctccgt gatgcatgag gctctgcaca accactacac acagaagagc 960
ctctccctgt ctctgggtaa atga 984

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<210> 26

<211> 327

<212> PRT

<213> Homo sapiens

<400> 26

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Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg
 1              5              10              15

Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr
      20              25              30

Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
      35              40              45

Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
 50              55              60

Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr
 65              70              75              80

Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys
      85              90              95

Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro Ser Cys Pro Ala Pro
      100              105              110

Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
      115              120              125

Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
      130              135              140

Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp
      145              150              155              160

Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe
      165              170              175

Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp
      180              185              190

Trp Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu
      195              200              205

Pro Ser Ser Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg
      210              215              220

Glu Pro Gln Val Tyr Thr Leu Pro Pro Ser Gln Glu Glu Met Thr Lys
      225              230              235              240

```

Asn Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp  
 245 250 255

Ile Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys  
 260 265 270

Thr Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser  
 275 280 285

Arg Leu Thr Val Asp Lys Ser Arg Trp Gln Glu Gly Asn Val Phe Ser  
 290 295 300

Cys Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser  
 305 310 315 320

Leu Ser Leu Ser Leu Gly Lys  
 325

<210> 27  
 <211> 300  
 <212> DNA  
 <213> Homo sapiens

<400> 27  
 taggctgcct gtgccccca cctgcctgtc cacaaccag cctctggtac atccatgccc 60  
 tctgccctaa gcctcacctg cacttttcct tggatttcag agtctccaaa ggcacaggcc 120  
 tcttcctgtc cactgcaca accccaagca gagggcagcc tcgccaaggc aaccacagcc 180  
 ccagccacca ccgtaacac aggtgagaag ccccttcctt gcacactcca cccccacca 240  
 cctgctcatt cctcagcgc ctctccagg cagcccttca taactccttg tctgagtctc 300

<210> 28  
 <211> 383  
 <212> PRT  
 <213> Homo sapiens

<400> 28  
 Ala Pro Thr Lys Ala Pro Asp Val Phe Pro Ile Ile Ser Gly Cys Arg  
 1 5 10 15

His Pro Lys Asp Asn Ser Pro Val Val Leu Ala Cys Leu Ile Thr Gly  
 20 25 30

Tyr His Pro Thr Ser Val Thr Val Thr Trp Tyr Met Gly Thr Gln Ser  
 35 40 45

Gln Pro Gln Arg Thr Phe Pro Glu Ile Gln Arg Arg Asp Ser Tyr Tyr  
 50 55 60

Met Thr Ser Ser Gln Leu Ser Thr Pro Leu Gln Gln Trp Arg Gln Gly  
 65 70 75 80

Glu Tyr Lys Cys Val Val Gln His Thr Ala Ser Lys Ser Lys Lys Glu  
 85 90 95

Ile Phe Arg Trp Pro Glu Ser Pro Lys Ala Gln Ala Ser Ser Val Pro  
 100 105 110

Thr Ala Gln Pro Gln Ala Glu Gly Ser Leu Ala Lys Ala Thr Thr Ala  
 115 120 125  
 Pro Ala Thr Thr Arg Asn Thr Gly Arg Gly Gly Glu Glu Lys Lys Lys  
 130 135 140  
 Glu Lys Glu Lys Glu Glu Gln Glu Glu Arg Glu Thr Lys Thr Pro Glu  
 145 150 155 160  
 Cys Pro Ser His Thr Gln Pro Leu Gly Val Tyr Leu Leu Thr Pro Ala  
 165 170 175  
 Val Gln Asp Leu Trp Leu Arg Asp Lys Ala Thr Phe Thr Cys Phe Val  
 180 185 190  
 Val Gly Ser Asp Leu Lys Asp Ala His Leu Thr Trp Glu Val Ala Gly  
 195 200 205  
 Lys Val Pro Thr Gly Gly Val Glu Glu Gly Leu Leu Glu Arg His Ser  
 210 215 220  
 Asn Gly Ser Gln Ser Gln His Ser Arg Leu Thr Leu Pro Arg Ser Leu  
 225 230 235 240  
 Trp Asn Ala Gly Thr Ser Val Thr Cys Thr Leu Asn His Pro Ser Leu  
 245 250 255  
 Pro Pro Gln Arg Leu Met Ala Leu Arg Glu Pro Ala Ala Gln Ala Pro  
 260 265 270  
 Val Lys Leu Ser Leu Asn Leu Leu Ala Ser Ser Asp Pro Pro Glu Ala  
 275 280 285  
 Ala Ser Trp Leu Leu Cys Glu Val Ser Gly Phe Ser Pro Pro Asn Ile  
 290 295 300  
 Leu Leu Met Trp Leu Glu Asp Gln Arg Glu Val Asn Thr Ser Gly Phe  
 305 310 315 320  
 Ala Pro Ala Arg Pro Pro Pro Gln Pro Gly Ser Thr Thr Phe Trp Ala  
 325 330 335  
 Trp Ser Val Leu Arg Val Pro Ala Pro Pro Ser Pro Gln Pro Ala Thr  
 340 345 350  
 Tyr Thr Cys Val Val Ser His Glu Asp Ser Arg Thr Leu Leu Asn Ala  
 355 360 365  
 Ser Arg Ser Leu Glu Val Ser Tyr Val Thr Asp His Gly Pro Met  
 370 375 380

&lt;210&gt; 29

&lt;211&gt; 300

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 29

gtcattagct ggatttagcc attccacaat gtacacatat ttcaaacatt gtgttgata 60  
 tgataaacat gtataatttt tgtcaattaa aaatttttag gaagaggagg agaagagaag 120  
 aagaaggaga aggagaaaga ggaacaagaa gagagagaga caaagacacc aggttttttc 180  
 tgaccctgg gctatcaaaa cacctattgc ccaataacta gttggccgtt ggtgccctaa 240  
 actattgaag cgattgctgt tatgtggatg ggccccggac acttagaaac tcgtgacccc 300

&lt;210&gt; 30

&lt;211&gt; 429

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 30

Pro Thr Lys Ala Pro Asp Val Phe Pro Ile Ile Ser Gly Cys Arg His  
 1 5 10 15

Pro Lys Asp Asn Ser Pro Val Val Leu Ala Cys Leu Ile Thr Gly Tyr  
 20 25 30

His Pro Thr Ser Val Thr Val Thr Trp Tyr Met Gly Thr Gln Ser Gln  
 35 40 45

Pro Gln Arg Thr Phe Pro Glu Ile Gln Arg Arg Asp Ser Tyr Tyr Met  
 50 55 60

Thr Ser Ser Gln Leu Ser Thr Pro Leu Gln Gln Trp Arg Gln Gly Glu  
 65 70 75 80

Tyr Lys Cys Val Val Gln His Thr Ala Ser Lys Ser Lys Lys Glu Ile  
 85 90 95

Phe Arg Trp Pro Glu Ser Pro Lys Ala Gln Ala Ser Ser Val Pro Thr  
 100 105 110

Ala Gln Pro Gln Ala Glu Gly Ser Leu Ala Lys Ala Thr Thr Ala Pro  
 115 120 125

Ala Thr Thr Arg Asn Thr Gly Arg Gly Gly Glu Glu Lys Lys Lys Glu  
 130 135 140

Lys Glu Lys Glu Glu Gln Glu Glu Arg Glu Thr Lys Thr Pro Glu Cys  
 145 150 155 160

Pro Ser His Thr Gln Pro Leu Gly Val Tyr Leu Leu Thr Pro Ala Val  
 165 170 175

Gln Asp Leu Trp Leu Arg Asp Lys Ala Thr Phe Thr Cys Phe Val Val  
 180 185 190

Gly Ser Asp Leu Lys Asp Ala His Leu Thr Trp Glu Val Ala Gly Lys  
 195 200 205

Val Pro Thr Gly Gly Val Glu Glu Gly Leu Leu Glu Arg His Ser Asn  
 210 215 220

Gly Ser Gln Ser Gln His Ser Arg Leu Thr Leu Pro Arg Ser Leu Trp  
 225 230 235 240

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<210> 31
<211> 500
<212> DNA
<213> Homo sapiens
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<210> 32  
<211> 383

<213> Homo sapiens

Pro Thr Lys Ala Pro Asp Val Phe Pro Ile Ile Ser Gly Cys Arg His  
1 5 10 15

Pro Lys Asp Asn Ser Pro Val Val Leu Ala Cys Leu Ile Thr Gly Tyr  
20 25 30

His Pro Thr Ser Val Thr Val Thr Trp Tyr Met Gly Thr Gln Ser Gln  
35 40 45

Pro Gln Arg Thr Phe Pro Glu Ile Gln Arg Arg Asp Ser Tyr Tyr Met  
50 55 60

Thr Ser Ser Gln Leu Ser Thr Pro Leu Gln Gln Trp Arg Gln Gly Glu  
65 70 75 80

Tyr Lys Cys Val Val Gln His Thr Ala Ser Lys Ser Lys Lys Glu Ile  
85 90 95

Phe Arg Trp Pro Glu Ser Pro Lys Ala Gln Ala Ser Ser Val Pro Thr  
100 105 110

Ala Gln Pro Gln Ala Glu Gly Ser Leu Ala Lys Ala Thr Thr Ala Pro  
115 120 125

Ala Thr Thr Arg Asn Thr Gly Arg Gly Gly Glu Glu Lys Lys Lys Glu  
130 135 140

Lys Glu Lys Glu Glu Gln Glu Glu Arg Glu Thr Lys Thr Pro Glu Cys  
145 150 155 160

Pro Ser His Thr Gln Pro Leu Gly Val Tyr Leu Leu Thr Pro Ala Val  
165 170 175

Gln Asp Leu Trp Leu Arg Asp Lys Ala Thr Phe Thr Cys Phe Val Val  
180 185 190

Gly Ser Asp Leu Lys Asp Ala His Leu Thr Trp Glu Val Ala Gly Lys  
195 200 205

Val Pro Thr Gly Gly Val Glu Glu Gly Leu Leu Glu Arg His Ser Asn  
210 215 220

Gly Ser Gln Ser Gln His Ser Arg Leu Thr Leu Pro Arg Ser Leu Trp  
225 230 235 240

Asn Ala Gly Thr Ser Val Thr Cys Thr Leu Asn His Pro Ser Leu Pro  
245 250 255

Pro Gln Arg Leu Met Ala Leu Arg Glu Pro Ala Ala Gln Ala Pro Val  
260 265 270

Lys Leu Ser Leu Asn Leu Leu Ala Ser Ser Asp Pro Pro Glu Ala Ala  
275 280 285

Ser Trp Leu Leu Cys Glu Val Ser Gly Phe Ser Pro Pro Asn Ile Leu  
 290 295 300

Leu Met Trp Leu Glu Asp Gln Arg Glu Val Asn Thr Ser Gly Phe Ala  
 305 310 315 320

Pro Ala Arg Pro Pro Pro Gln Pro Arg Ser Thr Thr Phe Trp Ala Trp  
 325 330 335

Ser Val Leu Arg Val Pro Ala Pro Pro Ser Pro Gln Pro Ala Thr Tyr  
 340 345 350

Thr Cys Val Val Ser His Glu Asp Ser Arg Thr Leu Leu Asn Ala Ser  
 355 360 365

Arg Ser Leu Glu Val Ser Tyr Val Thr Asp His Gly Pro Met Lys  
 370 375 380

<210> 33  
 <211> 500  
 <212> DNA  
 <213> Homo sapiens

<400> 33  
 ccacaggaaa ggagaaggga ggcaccacac cctggccggc cccacttctc tcccagtgcc 60  
 cccgtggcca gagcctgaca gccccccac ctccccgcag ctgcgcaggc acccgtcaag 120  
 ctttctctga acctgctggc ctctctctgac cctcccgagg cggcctcgtg gctcctgtgt 180  
 gaggtgtctg gcttctcgcc cccaacatc ctctgatgt ggctggagga ccagcgtgag 240  
 gtgaacactt ctgggtttgc cccgcacgc cccctccac agcccaggag caccacgttc 300  
 tgggcctgga gtgtgctgcg tgtcccagcc ccgcccagcc ctcagccagc cacctacacg 360  
 tgtgtggtca gccacgagga ctcccggact ctgctcaacg ccagccggag cctagaagtc 420  
 agctgtgagt cacccccagg ccagggttgg gacgggggact ctgagggggg ccataaggag 480  
 ctggaatcca tactaggcag 500

<210> 34

<400> 34  
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<210> 35  
 <211> 26  
 <212> PRT  
 <213> Homo sapiens

<400> 35  
 Pro Thr Lys Ala Pro Asp Val Phe Pro Ile Ile Ser Gly Cys Arg His  
 1 5 10 15

Pro Lys Asp Asn Ser Pro Val Val Leu Ala  
 20 25

<210> 36  
 <211> 100  
 <212> DNA  
 <213> Homo sapiens

<400> 36  
gacacgccga ttttttgtaa ttagatgtaa cagaccatgg ccccatgaaa tgatcccga 60  
ccagatccgt ccgcacccgc cactcagcag ctctggccga 100

<210> 37

<400> 37  
000

<210> 38  
<211> 200  
<212> DNA  
<213> Homo sapiens

<400> 38  
cgctcggccc ccgttcctcc ccagacctgg ccatgacccc cctgatccct cagagcaagg 60  
atgagaacag cgatgactac acgacctttg atgatgtggg cagcctgtgg accaccctgt 120  
ccacgtttgt ggccctcttc atcctcacc cctctacag cggcattgtc actttcatca 180  
aggtcagggg agcggccagg 200

<210> 39

<400> 39  
000

<210> 40  
<211> 100  
<212> DNA  
<213> Homo sapiens

<400> 40  
tcaggcttct agcccctgtc tgaccccagg ggctgtcttt cagggtgaagt agcccagaa 60  
gagcaggacg ccctgtacct gcagagaagg gaagcagcct 100

<210> 41

<400> 41  
000

<210> 42  
<211> 495  
<212> DNA  
<213> Homo sapiens

<400> 42  
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tgcttgataa ctgggtacca cccaacgtcc gtgactgtca cctggtacat ggggacacag 240  
agccagcccc agagaacctt ccctgagata caaagacggg acagctacta catgacaagc 300  
agccagctct ccacccccct ccagcagtgg cgccaaggcg agtacaaatg cgtgggtccag 360

cacaccgcca gcaagagtaa gaaggagatc ttccgctggc caggtaggct gcaccggaga 420  
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<210> 43

<400> 43

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<210> 44

<211> 1920

<212> DNA

<213> Homo sapiens

<400> 44

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 ttccccttga cccgctgctg caaaaacatt ccctccaatg ccacctccgt gactctgggc 180  
 tgctggcca cgggctactt cccggagccg gtgatgggtga cctgggacac aggtccctc 240  
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 atcagcttgc tgacctctc ggggtgcgtgg gccaaagcaga tgttcacctg ccgtgtggca 360  
 cacactccat cgtccacaga ctgggtcgac aacaaaacct tcagcggtaa gagaggcca 420  
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 tgcaagtggg aggaactggc agacctctg tccactgttg caatgacccc aggaagctac 1860  
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<210> 45

<211> 574

<212> PRT

<213> Homo sapiens

&lt;400&gt; 45

Met	Asp	Trp	Thr	Trp	Ile	Leu	Phe	Leu	Val	Ala	Ala	Ala	Thr	Arg	Val
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His	Ser	Gln	Thr	Gln	Leu	Val	Gln	Ser	Gly	Ala	Glu	Val	Arg	Lys	Pro
			20					25					30		
Gly	Ala	Ser	Val	Arg	Val	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Thr	Phe	Ile
		35					40					45			
Asp	Ser	Tyr	Ile	His	Trp	Ile	Arg	Gln	Ala	Pro	Gly	His	Gly	Leu	Glu
	50					55					60				
Trp	Val	Gly	Trp	Ile	Asn	Pro	Asn	Ser	Gly	Gly	Thr	Asn	Tyr	Ala	Pro
65					70					75					80
Arg	Phe	Gln	Gly	Arg	Val	Thr	Met	Thr	Arg	Asp	Ala	Ser	Phe	Ser	Thr
				85					90					95	
Ala	Tyr	Met	Asp	Leu	Arg	Ser	Leu	Arg	Ser	Asp	Asp	Ser	Ala	Val	Phe
			100					105					110		
Tyr	Cys	Ala	Lys	Ser	Asp	Pro	Phe	Trp	Ser	Asp	Tyr	Tyr	Asn	Phe	Asp
	115						120					125			
Tyr	Ser	Tyr	Thr	Leu	Asp	Val	Trp	Gly	Gln	Gly	Thr	Thr	Val	Thr	Val
	130					135					140				
Ser	Ser	Ala	Ser	Thr	Gln	Ser	Pro	Ser	Val	Phe	Pro	Leu	Thr	Arg	Cys
145					150					155					160
Cys	Lys	Asn	Ile	Pro	Ser	Asn	Ala	Thr	Ser	Val	Thr	Leu	Gly	Cys	Leu
				165					170					175	
Ala	Thr	Gly	Tyr	Phe	Pro	Glu	Pro	Val	Met	Val	Thr	Trp	Asp	Thr	Gly
			180					185					190		
Ser	Leu	Asn	Gly	Thr	Thr	Met	Thr	Leu	Pro	Ala	Thr	Thr	Leu	Thr	Leu
		195					200					205			
Ser	Gly	His	Tyr	Ala	Thr	Ile	Ser	Leu	Leu	Thr	Val	Ser	Gly	Ala	Trp
	210					215					220				
Ala	Lys	Gln	Met	Phe	Thr	Cys	Arg	Val	Ala	His	Thr	Pro	Ser	Ser	Thr
225					230					235					240
Asp	Trp	Val	Asp	Asn	Lys	Thr	Phe	Ser	Val	Cys	Ser	Arg	Asp	Phe	Thr
				245					250					255	
Pro	Pro	Thr	Val	Lys	Ile	Leu	Gln	Ser	Ser	Cys	Asp	Gly	Gly	Gly	His
			260					265					270		
Phe	Pro	Pro	Thr	Ile	Gln	Leu	Leu	Cys	Leu	Val	Ser	Gly	Tyr	Thr	Pro
		275					280					285			
Gly	Thr	Ile	Asn	Ile	Thr	Trp	Leu	Glu	Asp	Gly	Gln	Val	Met	Asp	Val
	290					295					300				

Asp Leu Ser Thr Ala Ser Thr Thr Gln Glu Gly Glu Leu Ala Ser Thr  
 305 310 315 320  
 Gln Ser Glu Leu Thr Leu Ser Gln Lys His Trp Leu Ser Asp Arg Thr  
 325 330 335  
 Tyr Thr Cys Gln Val Thr Tyr Gln Gly His Thr Phe Glu Asp Ser Thr  
 340 345 350  
 Lys Lys Cys Ala Asp Ser Asn Pro Arg Gly Val Ser Ala Tyr Leu Ser  
 355 360 365  
 Arg Pro Ser Pro Phe Asp Leu Phe Ile Arg Lys Ser Pro Thr Ile Thr  
 370 375 380  
 Cys Leu Val Val Asp Leu Ala Pro Ser Lys Gly Thr Val Asn Leu Thr  
 385 390 395 400  
 Trp Ser Arg Ala Ser Gly Lys Pro Val Asn His Ser Thr Arg Lys Glu  
 405 410 415  
 Glu Lys Gln Arg Asn Gly Thr Leu Thr Val Thr Ser Thr Leu Pro Val  
 420 425 430  
 Gly Thr Arg Asp Trp Ile Glu Gly Glu Thr Tyr Gln Cys Arg Val Thr  
 435 440 445  
 His Pro His Leu Pro Arg Ala Leu Met Arg Ser Thr Thr Lys Thr Ser  
 450 455 460  
 Gly Pro Arg Ala Ala Pro Glu Val Tyr Ala Phe Ala Thr Pro Glu Trp  
 465 470 475 480  
 Pro Gly Ser Arg Asp Lys Arg Thr Leu Ala Cys Leu Ile Gln Asn Phe  
 485 490 495  
 Met Pro Glu Asp Ile Ser Val Gln Trp Leu His Asn Glu Val Gln Leu  
 500 505 510  
 Pro Asp Ala Arg His Ser Thr Thr Gln Pro Arg Lys Thr Lys Gly Ser  
 515 520 525  
 Gly Phe Phe Val Phe Ser Arg Leu Glu Val Thr Arg Ala Glu Trp Glu  
 530 535 540  
 Gln Lys Asp Glu Phe Ile Cys Arg Ala Val His Glu Ala Ala Ser Pro  
 545 550 555 560  
 Ser Gln Thr Val Gln Arg Ala Val Ser Val Asn Pro Gly Lys  
 565 570

&lt;210&gt; 46

&lt;211&gt; 2213

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 46

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gtcaccgaga ggaccgtgga caagtccacc gagggggagg tgagcgccga cgaggagggc 1860
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tctcgaccgg caggggctgg ctggcttgca ggccacgagg tgggctctac cccacactgc 2160
tttgctgtgt atacgcttgt tgccctgaaa taaatatgca cattttatcc atg 2213

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&lt;210&gt; 47

&lt;211&gt; 627

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 47

```

Met Asp Trp Thr Trp Arg Phe Leu Phe Val Val Ala Ala Ala Thr Gly
  1                      5                      10                      15

```

```

Val Gln Ser Gln Val Gln Leu Val Gln Ser Gly Ala Glu Val Lys Lys
          20                      25                      30

```

```

Pro Gly Ser Ser Val Lys Val Ser Cys Lys Ala Ser Gly Gly Thr Phe
          35                      40                      45

```

```

Ser Ser Tyr Ala Ile Ser Trp Val Arg Gln Ala Pro Gly Gln Gly Leu
          50                      55                      60

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Glu	Trp	Met	Gly	Gly	Ile	Ile	Pro	Ile	Phe	Gly	Thr	Ala	Asn	Tyr	Ala		65		70		75		80
Gln	Lys	Phe	Gln	Gly	Arg	Val	Thr	Ile	Thr	Ala	Asp	Glu	Ser	Thr	Ser			85		90		95	
Thr	Ala	Tyr	Met	Glu	Leu	Ser	Ser	Leu	Arg	Ser	Glu	Asp	Thr	Ala	Val		100		105		110		
Tyr	Tyr	Cys	Ala	Lys	Thr	Gly	Ile	Leu	Gly	Pro	Tyr	Ser	Ser	Gly	Trp		115		120		125		
Tyr	Pro	Asn	Ser	Asp	Tyr	Tyr	Tyr	Tyr	Gly	Met	Asp	Val	Trp	Gly	Gln		130		135		140		
Gly	Thr	Thr	Val	Thr	Val	Ser	Ser	Gly	Ser	Ala	Ser	Ala	Pro	Thr	Leu		145		150		155		
Phe	Pro	Leu	Val	Ser	Cys	Glu	Asn	Ser	Pro	Ser	Asp	Thr	Ser	Ser	Val			165		170		175	
Ala	Val	Gly	Cys	Leu	Ala	Gln	Asp	Phe	Leu	Pro	Asp	Ser	Ile	Thr	Phe			180		185		190	
Ser	Trp	Lys	Tyr	Lys	Asn	Asn	Ser	Asp	Ile	Ser	Ser	Thr	Arg	Gly	Phe			195		200		205	
Pro	Ser	Val	Leu	Arg	Gly	Gly	Lys	Tyr	Ala	Ala	Thr	Ser	Gln	Val	Leu		210		215		220		
Leu	Pro	Ser	Lys	Asp	Val	Met	Gln	Gly	Thr	Asp	Glu	His	Val	Val	Cys		225		230		235		
Lys	Val	Gln	His	Pro	Asn	Gly	Asn	Lys	Glu	Lys	Asn	Val	Pro	Leu	Pro			245		250		255	
Val	Ile	Ala	Glu	Leu	Pro	Pro	Lys	Val	Ser	Val	Phe	Val	Pro	Pro	Arg			260		265		270	
Asp	Gly	Phe	Phe	Gly	Asn	Pro	Arg	Ser	Lys	Ser	Lys	Leu	Ile	Cys	Gln			275		280		285	
Ala	Thr	Gly	Phe	Ser	Pro	Arg	Gln	Ile	Gln	Val	Ser	Trp	Leu	Arg	Glu		290		295		300		
Gly	Lys	Gln	Val	Gly	Ser	Gly	Val	Thr	Thr	Asp	Gln	Val	Gln	Ala	Glu		305		310		315		
Ala	Lys	Glu	Ser	Gly	Pro	Thr	Thr	Tyr	Lys	Val	Thr	Ser	Thr	Leu	Thr			325		330		335	
Ile	Lys	Glu	Ser	Asp	Trp	Leu	Ser	Gln	Ser	Met	Phe	Thr	Cys	Arg	Val			340		345		350	
Asp	His	Arg	Gly	Leu	Thr	Phe	Gln	Gln	Asn	Ala	Ser	Ser	Met	Cys	Val		355		360		365		

Pro Asp Gln Asp Thr Ala Ile Arg Val Phe Ala Ile Pro Pro Ser Phe  
 370 375 380  
 Ala Ser Ile Phe Leu Thr Lys Ser Thr Lys Leu Thr Cys Leu Val Thr  
 385 390 395 400  
 Asp Leu Thr Thr Tyr Asp Ser Val Thr Ile Ser Trp Thr Arg Gln Asn  
 405 410 415  
 Gly Glu Ala Val Lys Thr His Thr Asn Ile Ser Glu Ser His Pro Asn  
 420 425 430  
 Ala Thr Phe Ser Ala Val Gly Glu Ala Ser Ile Cys Glu Asp Asp Trp  
 435 440 445  
 Asn Ser Gly Glu Arg Phe Thr Cys Thr Val Thr His Thr Asp Leu Pro  
 450 455 460  
 Ser Pro Leu Lys Gln Thr Ile Ser Arg Pro Lys Gly Val Ala Leu His  
 465 470 475 480  
 Arg Pro Asp Val Tyr Leu Leu Pro Pro Ala Arg Glu Gln Leu Asn Leu  
 485 490 495  
 Arg Glu Ser Ala Thr Ile Thr Cys Leu Val Thr Gly Phe Ser Pro Ala  
 500 505 510  
 Asp Val Phe Val Gln Trp Met Gln Arg Gly Gln Pro Leu Ser Pro Glu  
 515 520 525  
 Lys Tyr Val Thr Ser Ala Pro Met Pro Glu Pro Gln Ala Pro Gly Arg  
 530 535 540  
 Tyr Phe Ala His Ser Ile Leu Thr Val Ser Glu Glu Glu Trp Asn Thr  
 545 550 555 560  
 Gly Glu Thr Tyr Thr Cys Val Val Ala His Glu Ala Leu Pro Asn Arg  
 565 570 575  
 Val Thr Glu Arg Thr Val Asp Lys Ser Thr Glu Gly Glu Val Ser Ala  
 580 585 590  
 Asp Glu Glu Gly Phe Glu Asn Leu Trp Ala Thr Ala Ser Thr Phe Ile  
 595 600 605  
 Val Leu Phe Leu Leu Ser Leu Phe Tyr Ser Thr Thr Val Thr Leu Phe  
 610 615 620  
 Lys Val Lys  
 625

&lt;210&gt; 48

&lt;211&gt; 822

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: Protein  
encoded by plasmid pSSPICAMHuA2

&lt;400&gt; 48

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Met Gly Ser Lys Pro Phe Leu Ser Leu Leu Ser Leu Ser Leu Leu Leu
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Phe Thr Ser Thr Ser Leu Ala Gln Thr Ser Val Ser Pro Ser Lys Val
      20           25           30

Ile Leu Pro Arg Gly Gly Ser Val Leu Val Thr Cys Ser Thr Ser Cys
      35           40           45

Asp Gln Pro Lys Leu Leu Gly Ile Glu Thr Pro Leu Pro Lys Lys Glu
 50           55           60

Leu Leu Leu Pro Gly Asn Asn Arg Lys Val Tyr Glu Leu Ser Asn Val
 65           70           75           80

Gln Glu Asp Ser Gln Pro Met Cys Tyr Ser Asn Cys Pro Asp Gly Gln
      85           90           95

Ser Thr Ala Lys Thr Phe Leu Thr Val Tyr Trp Thr Pro Glu Arg Val
      100          105          110

Glu Leu Ala Pro Leu Pro Ser Trp Gln Pro Val Gly Lys Asn Leu Thr
      115          120          125

Leu Arg Cys Gln Val Glu Gly Gly Ala Pro Arg Ala Asn Leu Thr Val
      130          135          140

Val Leu Leu Arg Gly Glu Lys Glu Leu Lys Arg Glu Pro Ala Val Gly
      145          150          155          160

Glu Pro Ala Glu Val Thr Thr Thr Val Leu Val Arg Arg Asp His His
      165          170          175

Gly Ala Asn Phe Ser Cys Arg Thr Glu Leu Asp Leu Arg Pro Gln Gly
      180          185          190

Leu Glu Leu Phe Glu Asn Thr Ser Ala Pro Tyr Gln Leu Gln Thr Phe
      195          200          205

Val Leu Pro Ala Thr Pro Pro Gln Leu Val Ser Pro Arg Val Leu Glu
      210          215          220

Val Asp Thr Gln Gly Thr Val Val Cys Ser Leu Asp Gly Leu Phe Pro
      225          230          235          240

Val Ser Glu Ala Gln Val His Leu Ala Leu Gly Asp Gln Arg Leu Asn
      245          250          255

Pro Thr Val Thr Tyr Gly Asn Asp Ser Phe Ser Ala Lys Ala Ser Val
      260          265          270

Ser Val Thr Ala Glu Asp Glu Gly Thr Gln Arg Leu Thr Cys Ala Val
      275          280          285

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Ile Leu Gly Asn Gln Ser Gln Glu Thr Leu Gln Thr Val Thr Ile Tyr  
 290 295 300  
 Ser Phe Pro Ala Pro Asn Val Ile Leu Thr Lys Pro Glu Val Ser Glu  
 305 310 315 320  
 Gly Thr Glu Val Thr Val Lys Cys Glu Ala His Pro Arg Ala Lys Val  
 325 330 335  
 Thr Leu Asn Gly Val Pro Ala Gln Pro Leu Gly Pro Arg Ala Gln Leu  
 340 345 350  
 Leu Leu Lys Ala Thr Pro Glu Asp Asn Gly Arg Ser Phe Ser Cys Ser  
 355 360 365  
 Ala Thr Leu Glu Val Ala Gly Gln Leu Ile His Lys Asn Gln Thr Arg  
 370 375 380  
 Glu Leu Arg Val Leu Tyr Gly Pro Arg Leu Asp Glu Arg Asp Cys Pro  
 385 390 395 400  
 Gly Asn Trp Thr Trp Pro Glu Asn Ser Gln Gln Thr Pro Met Cys Gln  
 405 410 415  
 Ala Trp Gly Asn Pro Leu Pro Glu Leu Lys Cys Leu Lys Asp Gly Thr  
 420 425 430  
 Phe Pro Leu Pro Ile Gly Glu Ser Val Thr Val Thr Arg Asp Leu Glu  
 435 440 445  
 Gly Thr Tyr Leu Cys Arg Ala Arg Ser Thr Gln Gly Glu Val Thr Arg  
 450 455 460  
 Glu Val Thr Val Asn Val Thr Ser Gly Ser Ser Ala Ser Pro Thr Ser  
 465 470 475 480  
 Pro Lys Val Phe Pro Leu Ser Leu Asp Ser Thr Pro Gln Asp Gly Asn  
 485 490 495  
 Val Val Val Ala Cys Leu Val Gln Gly Phe Phe Pro Gln Glu Pro Leu  
 500 505 510  
 Ser Val Thr Trp Ser Glu Ser Gly Gln Asn Val Thr Ala Arg Asn Phe  
 515 520 525  
 Pro Pro Ser Gln Asp Ala Ser Gly Asp Leu Tyr Thr Thr Ser Ser Gln  
 530 535 540  
 Leu Thr Leu Pro Ala Thr Gln Cys Pro Asp Gly Lys Ser Val Thr Cys  
 545 550 555 560  
 His Val Lys His Tyr Thr Asn Ser Ser Gln Asp Val Thr Val Pro Cys  
 565 570 575  
 Arg Val Pro Pro Pro Pro Pro Cys Cys His Pro Arg Leu Ser Leu His  
 580 585 590

Arg Pro Ala Leu Glu Asp Leu Leu Leu Gly Ser Glu Ala Asn Leu Thr  
 595 600 605  
 Cys Thr Leu Thr Gly Leu Arg Asp Ala Ser Gly Ala Thr Phe Thr Trp  
 610 615 620  
 Thr Pro Ser Ser Gly Lys Ser Ala Val Gln Gly Pro Pro Glu Arg Asp  
 625 630 635 640  
 Leu Cys Gly Cys Tyr Ser Val Ser Arg Val Leu Pro Gly Cys Ala Gln  
 645 650 655  
 Pro Trp Asn His Gly Glu Thr Phe Thr Cys Thr Ala Ala His Pro Glu  
 660 665 670  
 Leu Lys Thr Pro Leu Thr Ala Asn Ile Thr Lys Ser Gly Asn Thr Phe  
 675 680 685  
 Arg Pro Glu Val His Leu Leu Pro Pro Pro Ser Glu Glu Leu Ala Leu  
 690 695 700  
 Asn Glu Leu Val Thr Leu Thr Cys Leu Ala Arg Gly Phe Ser Pro Lys  
 705 710 715 720  
 Asp Val Leu Val Arg Trp Leu Gln Gly Ser Gln Glu Leu Pro Arg Glu  
 725 730 735  
 Lys Tyr Leu Thr Trp Ala Ser Arg Gln Glu Pro Ser Gln Gly Thr Thr  
 740 745 750  
 Thr Tyr Ala Val Thr Ser Ile Leu Arg Val Ala Ala Glu Asp Trp Lys  
 755 760 765  
 Lys Gly Glu Thr Phe Ser Cys Met Val Gly His Glu Ala Leu Pro Leu  
 770 775 780  
 Ala Phe Thr Gln Lys Thr Ile Asp Arg Leu Ala Gly Lys Pro Thr His  
 785 790 795 800  
 Ile Asn Val Ser Val Val Met Ala Glu Ala Asp Gly Thr Cys Tyr Arg  
 805 810 815  
 Ser Glu Lys Asp Glu Leu  
 820

&lt;210&gt; 49

 <400> 49  
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&lt;210&gt; 50

&lt;211&gt; 159

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 50

Met Glu Asn His Leu Leu Phe Trp Gly Val Leu Ala Val Phe Ile Lys  
 1 5 10 15

Ala Val His Val Lys Ala Gln Glu Asp Glu Arg Ile Val Leu Val Asp  
 20 25 30

Asn Lys Cys Lys Cys Ala Arg Ile Thr Ser Arg Ile Ile Arg Ser Ser  
 35 40 45

Glu Asp Pro Asn Glu Asp Ile Val Glu Arg Asn Ile Arg Ile Ile Val  
 50 55 60

Pro Leu Asn Asn Arg Glu Asn Ile Ser Asp Pro Thr Ser Pro Leu Arg  
 65 70 75 80

Thr Arg Phe Val Tyr His Leu Ser Asp Leu Cys Lys Lys Cys Asp Pro  
 85 90 95

Thr Glu Val Glu Leu Asp Asn Gln Ile Val Thr Ala Thr Gln Ser Asn  
 100 105 110

Ile Cys Asp Glu Asp Ser Ala Thr Glu Thr Cys Tyr Thr Tyr Asp Arg  
 115 120 125

Asn Lys Cys Tyr Thr Ala Val Val Pro Leu Val Tyr Gly Gly Glu Thr  
 130 135 140

Lys Met Val Glu Thr Ala Leu Thr Pro Asp Ala Cys Tyr Pro Asp  
 145 150 155

&lt;210&gt; 51

&lt;211&gt; 602

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 51

Met Val Leu Phe Val Leu Thr Cys Leu Leu Ala Val Phe Pro Ala Ile  
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Ser Thr Lys Ser Pro Ile Phe Gly Pro Glu Glu Val Asn Ser Val Glu  
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&lt;211&gt; 2516

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

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&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 54

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&lt;211&gt; 2009

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

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&lt;211&gt; 2590

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 56

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gtggcctgag tccagggaca ggcgccagca ggggtgctgac gcacccacct ccatcccaga 1440
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gccctagagt ggcttgcac cagggacagg tcccagtcgg gtgctgacac atctgcctcc 1620
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cccaaggata cccttatgat ttcccggacc cctgaggtca cgtgcgtggg ggtggacgtg 1740
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gccaagacaa agccgcggga ggagcagtag aacagcacgt tccgtgtggg cagcgtcctc 1860
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tgaggggcac atggacagag gccagcttga cccacctct gccctgggag tgaccgctgt 2040
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gagcaggtgg cagcagggga acatcttctc atgctccgtg atgcatgagg ctctgcacaa 2340
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ccccgcctcc ccgggctctc ggggtcgccg gaggatgctt ggcacgtacc ccgtgtacat 2460
acttcccggg caccagcat ggaaataaag caccagcgc tgccctgggc ccctgtgaga 2520
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agagcgggtc
2590

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<210> 57

<211> 2028

<212> DNA

<213> Homo sapiens

<400> 57

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agctttctgg ggcaggccgg gcctgacttt ggctgggggc agggaggggg ctaagggtgac 60
gcagggtggcg ccagccagggt gcacacccaa tgcccagtag cccagacact ggacctgca 120
tgaccatcg cggatagaca agaaccgagg ggctctgctg cctggggccc agctctgtcc 180
cacaccggcg tcacatggca ccacctctct tgcagcttcc accaaggggc catccgtctt 240
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caaggactac ttccccgaac cgggtgacgg gtctgtggaac tcaggcgccc tgaccagcgg 360
cgtgcacacc ttccccggctg tcctacagtc ctcaggactc tactccctca gcagcgtggg 420
gaccgtgccc tccagcagct tgggcacgaa gacctacacc tgcaacgtag atcacaagcc 480
cagcaacacc aagggtggaca agagagttgg tgagaggcca gcacaggggag ggaggggtgtc 540
tgctggaagc caggctcagc cctcctgcct ggacgcaacc cggctgtgca gcccagccc 600

```

```

agggcagcaa ggcattgcccc atctgtctcc tcacccggag gcctctgacc acccactca 660
tgctcagga gaggtcttc tggatttttc caccaggctc ccggcaccac aggttgatg 720
ccctacccc aggcctgcg catacagggc aggtgctgcg ctacagacctg ccaagagcca 780
tatccgggag gacctgccc ctgacctaaag cccaccccaa aggccaaact ctccactccc 840
tcagctcaga cactttctct cctcccagat ctgagtaact cccaatcttc tctctgcaga 900
gtccaaatat ggtcccccatt gcccattatg cccaggtaag ccaaccagg cctcgccctc 960
cagctcaagg cgggacaggt gccctagagt agcctgcatc caggacagg cccagcccg 1020
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tcttctgtt cccccaaaa cccaaggaca ctctcatgat ctcccggacc cctgaggtca 1140
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atggcgtgga ggtgcataat gccaagacaa agccggggga ggagcagttc aacagcacgt 1260
accgtgtggt cagcgtcctc accgtcctgc accaggactg gctgaacggc aaggagtaca 1320
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aaggtgggac ccacgggggtg cgagggggcc acggacagag gccagctcgg cccaccctct 1440
gccctgggag tgaccgctgt gccaacctct gtccctacag ggcagccccg agagccacag 1500
gtgtacaccc tgcccccatc ccaggaggag atgaccaaga accaggtcag cctgacctgc 1560
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tgagtgcag ggccggcaag ccccgctcc ccgggtcttc ggggtcgcgc gaggatgctt 1860
ggcacgtacc ccgtctacat acttcccagg caccagcat ggaaataaag caccaccac 1920
tgccctgggc ccctgtgaga ctgtgatggt tctttccacg ggtcaggccg agtctgaggc 1980
ctgagtgaca tgaggagggc agagcgggtc ccactgtccc cacactgg 2028

```

<210> 58  
 <211> 106  
 <212> DNA  
 <213> Homo sapiens

```

<400> 58
tgccacccca ggactctgtc ttccagcacc caccaaggct ccggatgtgt tccccatcat 60
atcagggtgc agacacccaa aggataacag ccctgtgggt ctggca 106

```

<210> 59  
 <211> 1725  
 <212> DNA  
 <213> Homo sapiens

```

<400> 59
atggactgga cctggatcct cttcttgggt gcagcagcca cgcgagtcca ctcccagacg 60
cagttggtgc agtctggggc tgaggtgagg aagcctgggg catcagttag ggtctcctgc 120
aaggtctctg gatacacctt catcgactcc tatatccact ggatacgaca ggccctggg 180
cacgggcttg agtgggtggg atggatcaac cctaacagtg gtggcacaaa ctatgctccg 240
agatttcagg gcagggtcac catgaccaga gacgcgtcct tcagtacagc ctacatggac 300
ctgagaagtc tgagatctga cgactcggcc gtgttttact gtgcgaaaag tgaccctttt 360
tggagtgatt attataactt tgactactcg tacacttttg acgtctgggg ccaagggacc 420
acggtcacccg tctcctcagc ctccacacag agcccatccg tcttcccctt gaccgctgc 480
tgcaaaaaca ttccctccaa tgccacctcc gtgactctgg gctgctggg caggggtac 540
ttcccggagc cgggtgatggg gacctgggac acaggctccc tcaacggggc aactatgacc 600
ttaccagcca ccacctcac gctctctggt cactatgcca ccatcagctt gctgaccgtc 660
tcgggtgctg gggccaagca gatgttcacc tgccgtgtgg cacacactcc atcgtccaca 720
gactgggtcg acaacaaaac cttcagcgtc tgctccaggg acttcacccc gccaccgtg 780
aagatcttac agtcgtcctg cgacggcggc gggcacttcc ccccgaccat ccagctcctg 840
tgccctgctc ctgggtacac cccagggact atcaacatca cctggctgga ggacgggcag 900
gtcatggagc tggacttgct caccgcctct accacgcagg aggtgagct ggccctccaca 960

```

```

caaagcgagc tcaccctcag ccagaagcac tggctgtcag accgcaccta cacctgccag 1020
gtcacctatc aaggtcacac ctttgaggac agcaccaaga agtgtgcaga ttccaacccg 1080
agaggggtga gcgcctacct aagccggccc agcccgttcg acctgttcac ccgcaagtcg 1140
cccacgatca cctgtctggt ggtggacctg gcaccagca aggggaccgt gaacctgacc 1200
tgggtccggg ccagtgggaa gcctgtgaac cactccacca gaaaggagga gaagcagcgc 1260
aatggcacgt taaccgtcac gtccaccctg ccggtgggca cccgagactg gatcgagggg 1320
gagacctacc agtgcagggg gacccacccc cacctgccc gggccctcat gcggtccacg 1380
accaagacca gcggcccgcg tgctgccccg gaagtctatg cgtttgcgac gccggagtgg 1440
ccggggagcc gggacaagcg caccctcgcc tgcctgatcc agaacttcac gcctgaggac 1500
atctcgggtc agtggctgca caacgaggtg cagctcccgg acgcccggca cagcagcagc 1560
cagccccgca agaccaaggg ctccggcttc ttcgtcttca gccgcctgga ggtgaccagg 1620
gccgaatggg agcagaaaga tgagttcatc tgccgtgcag tccatgaggc agcgagcccc 1680
tcacagaccg tccagcgagc ggtgtctgta aatcccggta aatga 1725

```

<210> 60

<211> 428

<212> PRT

<213> Homo sapiens

<400> 60

```

Ala Ser Thr Gln Ser Pro Ser Val Phe Pro Leu Thr Arg Cys Cys Lys
  1              5              10              15

```

```

Asn Ile Pro Ser Asn Ala Thr Ser Val Thr Leu Gly Cys Leu Ala Thr
      20              25              30

```

```

Gly Tyr Phe Pro Glu Pro Val Met Val Thr Trp Asp Thr Gly Ser Leu
      35              40              45

```

```

Asn Gly Thr Thr Met Thr Leu Pro Ala Thr Thr Leu Thr Leu Ser Gly
      50              55              60

```

```

His Tyr Ala Thr Ile Ser Leu Leu Thr Val Ser Gly Ala Trp Ala Lys
      65              70              75              80

```

```

Gln Met Phe Thr Cys Arg Val Ala His Thr Pro Ser Ser Thr Asp Trp
      85              90              95

```

```

Val Asp Asn Lys Thr Phe Ser Val Cys Ser Arg Asp Phe Thr Pro Pro
      100              105              110

```

```

Thr Val Lys Ile Leu Gln Ser Ser Cys Asp Gly Gly Gly His Phe Pro
      115              120              125

```

```

Pro Thr Ile Gln Leu Leu Cys Leu Val Ser Gly Tyr Thr Pro Gly Thr
      130              135              140

```

```

Ile Asn Ile Thr Trp Leu Glu Asp Gly Gln Val Met Asp Val Asp Leu
      145              150              155              160

```

```

Ser Thr Ala Ser Thr Thr Gln Glu Gly Glu Leu Ala Ser Thr Gln Ser
      165              170              175

```

```

Glu Leu Thr Leu Ser Gln Lys His Trp Leu Ser Asp Arg Thr Tyr Thr
      180              185              190

```

Cys Gln Val Thr Tyr Gln Gly His Thr Phe Glu Asp Ser Thr Lys Lys  
 195 200 205  
 Cys Ala Asp Ser Asn Pro Arg Gly Val Ser Ala Tyr Leu Ser Arg Pro  
 210 215 220  
 Ser Pro Phe Asp Leu Phe Ile Arg Lys Ser Pro Thr Ile Thr Cys Leu  
 225 230 235 240  
 Val Val Asp Leu Ala Pro Ser Lys Gly Thr Val Asn Leu Thr Trp Ser  
 245 250 255  
 Arg Ala Ser Gly Lys Pro Val Asn His Ser Thr Arg Lys Glu Glu Lys  
 260 265 270  
 Gln Arg Asn Gly Thr Leu Thr Val Thr Ser Thr Leu Pro Val Gly Thr  
 275 280 285  
 Arg Asp Trp Ile Glu Gly Glu Thr Tyr Gln Cys Arg Val Thr His Pro  
 290 295 300  
 His Leu Pro Arg Ala Leu Met Arg Ser Thr Thr Lys Thr Ser Gly Pro  
 305 310 315 320  
 Arg Ala Ala Pro Glu Val Tyr Ala Phe Ala Thr Pro Glu Trp Pro Gly  
 325 330 335  
 Ser Arg Asp Lys Arg Thr Leu Ala Cys Leu Ile Gln Asn Phe Met Pro  
 340 345 350  
 Glu Asp Ile Ser Val Gln Trp Leu His Asn Glu Val Gln Leu Pro Asp  
 355 360 365  
 Ala Arg His Ser Thr Thr Gln Pro Arg Lys Thr Lys Gly Ser Gly Phe  
 370 375 380  
 Phe Val Phe Ser Arg Leu Glu Val Thr Arg Ala Glu Trp Glu Gln Lys  
 385 390 395 400  
 Asp Glu Phe Ile Cys Arg Ala Val His Glu Ala Ala Ser Pro Ser Gln  
 405 410 415  
 Thr Val Gln Arg Ala Val Ser Val Asn Pro Gly Lys  
 420 425

&lt;210&gt; 61

&lt;211&gt; 1884

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 61

atggactgga cctggagggt cctctttgtg gtggcagcag ctacaggtgt ccagtcaccag 60  
 gtgcagctgg tgcagtctgg ggctgagggt aagaagcctg ggtcctcggg gaaggtctcc 120  
 tgcaaggctt ctggaggcac cttcagcagc tatgctatca gctgggtgcg acaggcccct 180  
 ggacaagggc ttgagtggat gggagggatc atccctatct ttggtacagc aaactacgca 240  
 cagaagttcc agggcagagt cagcattacc gcggacgaat ccacgagcac agcctacatg 300  
 gagctgagca gcctgagatc tgaggacacg gccgtgtatt actgtgcgaa aaccgggatc 360

```

ctggggccgt atagcagtgg ctggtaccgg aactcggact actactacta cggatatggac 420
gtctggggcc aagggaccac ggtcacccgc tcctcagga gtgcatccgc cccaaccctt 480
ttccccctcg tctcctgtga gaattccccg tcggatacga gcagcgtggc cgttggtgc 540
ctcgcacagg acttccttcc cgactccatc actttctcct ggaaatacaa gaacaactct 600
gacatcagca gcacccgggg cttcccatca gtcctgagag ggggcaagta cgcagccacc 660
tcacaggtgc tgctgccttc caaggacgtc atgcagggca cagacgaaca cgtgggtgtgc 720
aaagtccagc accccaacgg caacaaagaa aagaacgtgc ctcttccagt gattgtgtgag 780
ctgcctccca aagtgcgctt cttcgtccca cccgcgcacg gcttcttcgg caacccccgc 840
agcaagtcca agtcatctg ccaggccacg ggtttcagtc cccggcagat tcaggtgtcc 900
tggtctgcgc aggggaagca ggtggggtct ggcgtcacca cggaccaggt gcaggtgtgag 960
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cagaatgcgt cctccatgtg tgtccccgat caagacacag ccattccgggt cttcgccatc 1140
cccccatcct ttgccagcat cttcctcacc aagtccacca agttgacctg cctggtcaca 1200
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acagacctgc cctcgccact gaagcagacc atctcccggc ccaaggggggt ggccctgcac 1440
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accatcacgt gcctggtgac gggcttctct cccgcggacg tcttcgtgca gtggatgcag 1560
agggggcagc ccttgtcccc ggagaagtat gtgaccagcg ccccaatgcc tgagccccag 1620
gccccaggcc ggtacttcgc ccacagcatc ctgaccgtgt ccgaagagga atggaacacg 1680
ggggagacct acacctgcgt ggtggcccat gaggccctgc ccaacaggggt caccgagagg 1740
accgtggaca agtccaccga gggggaggtg agcgccgacg aggagggctt tgagaacctg 1800
tgggccaccg cctccacctt catcgtcctc ttctcctcga gcctctteta cagtaccacc 1860
gtcaccttgt tcaaggtgaa atga 1884

```

<210> 62

<211> 454

<212> PRT

<213> Homo sapiens

<400> 62

Gly Ser Ala Ser Ala Pro Thr Leu Phe Pro Leu Val Ser Cys Glu Asn  
1 5 10 15

Ser Pro Ser Asp Thr Ser Ser Val Ala Val Gly Cys Leu Ala Gln Asp  
20 25 30

Phe Leu Pro Asp Ser Ile Thr Phe Ser Trp Lys Tyr Lys Asn Asn Ser  
35 40 45

Asp Ile Ser Ser Thr Arg Gly Phe Pro Ser Val Leu Arg Gly Gly Lys  
50 55 60

Tyr Ala Ala Thr Ser Gln Val Leu Leu Pro Ser Lys Asp Val Met Gln  
65 70 75 80

Gly Thr Asp Glu His Val Val Cys Lys Val Gln His Pro Asn Gly Asn  
85 90 95

Lys Glu Lys Asn Val Pro Leu Pro Val Ile Ala Glu Leu Pro Pro Lys  
100 105 110

Val Ser Val Phe Val Pro Pro Arg Asp Gly Phe Phe Gly Asn Pro Arg  
115 120 125

Ser	Lys	Ser	Lys	Leu	Ile	Cys	Gln	Ala	Thr	Gly	Phe	Ser	Pro	Arg	Gln	130	135	140
Ile	Gln	Val	Ser	Trp	Leu	Arg	Glu	Gly	Lys	Gln	Val	Gly	Ser	Gly	Val	145	150	155
Thr	Thr	Asp	Gln	Val	Gln	Ala	Glu	Ala	Lys	Glu	Ser	Gly	Pro	Thr	Thr	165	170	175
Tyr	Lys	Val	Thr	Ser	Thr	Leu	Thr	Ile	Lys	Glu	Ser	Asp	Trp	Leu	Ser	180	185	190
Gln	Ser	Met	Phe	Thr	Cys	Arg	Val	Asp	His	Arg	Gly	Leu	Thr	Phe	Gln	195	200	205
Gln	Asn	Ala	Ser	Ser	Met	Cys	Val	Pro	Asp	Gln	Asp	Thr	Ala	Ile	Arg	210	215	220
Val	Phe	Ala	Ile	Pro	Pro	Ser	Phe	Ala	Ser	Ile	Phe	Leu	Thr	Lys	Ser	225	230	235
Thr	Lys	Leu	Thr	Cys	Leu	Val	Thr	Asp	Leu	Thr	Thr	Tyr	Asp	Ser	Val	245	250	255
Thr	Ile	Ser	Trp	Thr	Arg	Gln	Asn	Gly	Glu	Ala	Val	Lys	Thr	His	Thr	260	265	270
Asn	Ile	Ser	Glu	Ser	His	Pro	Asn	Ala	Thr	Phe	Ser	Ala	Val	Gly	Glu	275	280	285
Ala	Ser	Ile	Cys	Glu	Asp	Asp	Trp	Asn	Ser	Gly	Glu	Arg	Phe	Thr	Cys	290	295	300
Thr	Val	Thr	His	Thr	Asp	Leu	Pro	Ser	Pro	Leu	Lys	Gln	Thr	Ile	Ser	305	310	315
Arg	Pro	Lys	Gly	Val	Ala	Leu	His	Arg	Pro	Asp	Val	Tyr	Leu	Leu	Pro	325	330	335
Pro	Ala	Arg	Glu	Gln	Leu	Asn	Leu	Arg	Glu	Ser	Ala	Thr	Ile	Thr	Cys	340	345	350
Leu	Val	Thr	Gly	Phe	Ser	Pro	Ala	Asp	Val	Phe	Val	Gln	Trp	Met	Gln	355	360	365
Arg	Gly	Gln	Pro	Leu	Ser	Pro	Glu	Lys	Tyr	Val	Thr	Ser	Ala	Pro	Met	370	375	380
Pro	Glu	Pro	Gln	Ala	Pro	Gly	Arg	Tyr	Phe	Ala	His	Ser	Ile	Leu	Thr	385	390	395
Val	Ser	Glu	Glu	Glu	Trp	Asn	Thr	Gly	Glu	Thr	Tyr	Thr	Cys	Val	Val	405	410	415
Ala	His	Glu	Ala	Leu	Pro	Asn	Arg	Val	Thr	Glu	Arg	Thr	Val	Asp	Lys	420	425	430

Ser Thr Gly Lys Pro Thr Leu Tyr Asn Val Ser Leu Val Met Ser Asp  
 435 440 445

Thr Ala Gly Thr Cys Tyr  
 450

<210> 63

<211> 532

<212> PRT

<213> Homo sapiens

<400> 63

Met Ala Pro Ser Ser Pro Arg Pro Ala Leu Pro Ala Leu Leu Val Leu  
 1 5 10 15

Leu Gly Ala Leu Phe Pro Gly Pro Gly Asn Ala Gln Thr Ser Val Ser  
 20 25 30

Pro Ser Lys Val Ile Leu Pro Arg Gly Gly Ser Val Leu Val Thr Cys  
 35 40 45

Ser Thr Ser Cys Asp Gln Pro Lys Leu Leu Gly Ile Glu Thr Pro Leu  
 50 55 60

Pro Lys Lys Glu Leu Leu Leu Pro Gly Asn Asn Arg Lys Val Tyr Glu  
 65 70 75 80

Leu Ser Asn Val Gln Glu Asp Ser Gln Pro Met Cys Tyr Ser Asn Cys  
 85 90 95

Pro Asp Gly Gln Ser Thr Ala Lys Thr Phe Leu Thr Val Tyr Trp Thr  
 100 105 110

Pro Glu Arg Val Glu Leu Ala Pro Leu Pro Ser Trp Gln Pro Val Gly  
 115 120 125

Lys Asn Leu Thr Leu Arg Cys Gln Val Glu Gly Gly Ala Pro Arg Ala  
 130 135 140

Asn Leu Thr Val Val Leu Leu Arg Gly Glu Lys Glu Leu Lys Arg Glu  
 145 150 155 160

Pro Ala Val Gly Glu Pro Ala Glu Val Thr Thr Thr Val Leu Val Arg  
 165 170 175

Arg Asp His His Gly Ala Asn Phe Ser Cys Arg Thr Glu Leu Asp Leu  
 180 185 190

Arg Pro Gln Gly Leu Glu Leu Phe Glu Asn Thr Ser Ala Pro Tyr Gln  
 195 200 205

Leu Gln Thr Phe Val Leu Pro Ala Thr Pro Pro Gln Leu Val Ser Pro  
 210 215 220

Arg Val Leu Glu Val Asp Thr Gln Gly Thr Val Val Cys Ser Leu Asp  
 225 230 235 240

Gly Leu Phe Pro Val Ser Glu Ala Gln Val His Leu Ala Leu Gly Asp  
 245 250 255  
 Gln Arg Leu Asn Pro Thr Val Thr Tyr Gly Asn Asp Ser Phe Ser Ala  
 260 265 270  
 Lys Ala Ser Val Ser Val Thr Ala Glu Asp Glu Gly Thr Gln Arg Leu  
 275 280 285  
 Thr Cys Ala Val Ile Leu Gly Asn Gln Ser Gln Glu Thr Leu Gln Thr  
 290 295 300  
 Val Thr Ile Tyr Ser Phe Pro Ala Pro Asn Val Ile Leu Thr Lys Pro  
 305 310 315 320  
 Glu Val Ser Glu Gly Thr Glu Val Thr Val Lys Cys Glu Ala His Pro  
 325 330 335  
 Arg Ala Lys Val Thr Leu Asn Gly Val Pro Ala Gln Pro Leu Gly Pro  
 340 345 350  
 Arg Ala Gln Leu Leu Leu Lys Ala Thr Pro Glu Asp Asn Gly Arg Ser  
 355 360 365  
 Phe Ser Cys Ser Ala Thr Leu Glu Val Ala Gly Gln Leu Ile His Lys  
 370 375 380  
 Asn Gln Thr Arg Glu Leu Arg Val Leu Tyr Gly Pro Arg Leu Asp Glu  
 385 390 395 400  
 Arg Asp Cys Pro Gly Asn Trp Thr Trp Pro Glu Asn Ser Gln Gln Thr  
 405 410 415  
 Pro Met Cys Gln Ala Trp Gly Asn Pro Leu Pro Glu Leu Lys Cys Leu  
 420 425 430  
 Lys Asp Gly Thr Phe Pro Leu Pro Ile Gly Glu Ser Val Thr Val Thr  
 435 440 445  
 Arg Asp Leu Glu Gly Thr Tyr Leu Cys Arg Ala Arg Ser Thr Gln Gly  
 450 455 460  
 Glu Val Thr Arg Glu Val Thr Val Asn Val Leu Ser Pro Arg Tyr Glu  
 465 470 475 480  
 Ile Val Ile Ile Thr Val Val Ala Ala Ala Val Ile Met Gly Thr Ala  
 485 490 495  
 Gly Leu Ser Thr Tyr Leu Tyr Asn Arg Gln Arg Lys Ile Lys Lys Tyr  
 500 505 510  
 Arg Leu Gln Gln Ala Gln Lys Gly Thr Pro Met Lys Pro Asn Thr Gln  
 515 520 525  
 Ala Thr Pro Pro  
 530

<210> 64  
 <211> 275  
 <212> PRT  
 <213> Homo sapiens

<400> 64

Met	Ser	Ser	Phe	Gly	Tyr	Arg	Thr	Leu	Thr	Val	Ala	Leu	Phe	Thr	Leu
1				5					10					15	
Ile	Cys	Cys	Pro	Gly	Ser	Asp	Glu	Lys	Val	Phe	Glu	Val	His	Val	Arg
			20					25					30		
Pro	Lys	Lys	Leu	Ala	Val	Glu	Pro	Lys	Gly	Ser	Leu	Glu	Val	Asn	Cys
		35					40					45			
Ser	Thr	Thr	Cys	Asn	Gln	Pro	Glu	Val	Gly	Gly	Leu	Glu	Thr	Ser	Leu
	50					55					60				
Asp	Lys	Ile	Leu	Leu	Asp	Glu	Gln	Ala	Gln	Trp	Lys	His	Tyr	Leu	Val
65					70					75					80
Ser	Asn	Ile	Ser	His	Asp	Thr	Val	Leu	Gln	Cys	His	Phe	Thr	Cys	Ser
				85					90					95	
Gly	Lys	Gln	Glu	Ser	Met	Asn	Ser	Asn	Val	Ser	Val	Tyr	Gln	Pro	Pro
			100					105					110		
Arg	Gln	Val	Ile	Leu	Thr	Leu	Gln	Pro	Thr	Leu	Val	Ala	Val	Gly	Lys
		115					120					125			
Ser	Phe	Thr	Ile	Glu	Cys	Arg	Val	Pro	Thr	Val	Glu	Pro	Leu	Asp	Ser
	130					135					140				
Leu	Thr	Leu	Phe	Leu	Phe	Arg	Gly	Asn	Glu	Thr	Leu	His	Tyr	Glu	Thr
145					150					155					160
Phe	Gly	Lys	Ala	Ala	Pro	Ala	Pro	Gln	Glu	Ala	Thr	Ala	Thr	Phe	Asn
			165						170					175	
Ser	Thr	Ala	Asp	Arg	Glu	Asp	Gly	His	Arg	Asn	Phe	Ser	Cys	Leu	Ala
			180					185					190		
Val	Leu	Asp	Leu	Met	Ser	Arg	Gly	Gly	Asn	Ile	Phe	His	Lys	His	Ser
		195					200					205			
Ala	Pro	Lys	Met	Leu	Glu	Ile	Tyr	Glu	Pro	Val	Ser	Asp	Ser	Gln	Met
	210					215					220				
Val	Ile	Ile	Val	Thr	Val	Val	Ser	Val	Leu	Leu	Ser	Leu	Phe	Val	Thr
225					230					235					240
Ser	Val	Leu	Leu	Cys	Phe	Ile	Phe	Gly	Gln	His	Leu	Arg	Gln	Gln	Arg
			245						250					255	
Met	Gly	Thr	Tyr	Gly	Val	Arg	Ala	Ala	Trp	Arg	Arg	Leu	Pro	Gln	Ala
			260					265					270		

Phe Arg Pro  
275

<210> 65

<211> 547

<212> PRT

<213> Homo sapiens

<400> 65

Met Ala Thr Met Val Pro Ser Val Leu Trp Pro Arg Ala Cys Trp Thr  
1 5 10 15

Leu Leu Val Cys Cys Leu Leu Thr Pro Gly Val Gln Gly Gln Glu Phe  
20 25 30

Leu Leu Arg Val Glu Pro Gln Asn Pro Val Leu Ser Ala Gly Gly Ser  
35 40 45

Leu Phe Val Asn Cys Ser Thr Asp Cys Pro Ser Ser Glu Lys Ile Ala  
50 55 60

Leu Glu Thr Ser Leu Ser Lys Glu Leu Val Ala Ser Gly Met Gly Trp  
65 70 75 80

Ala Ala Phe Asn Leu Ser Asn Val Thr Gly Asn Ser Arg Ile Leu Cys  
85 90 95

Ser Val Tyr Cys Asn Gly Ser Gln Ile Thr Gly Ser Ser Asn Ile Thr  
100 105 110

Val Tyr Gly Leu Pro Glu Arg Val Glu Leu Ala Pro Leu Pro Pro Trp  
115 120 125

Gln Pro Val Gly Gln Asn Phe Thr Leu Arg Cys Gln Val Glu Gly Gly  
130 135 140

Ser Pro Arg Thr Ser Leu Thr Val Val Leu Leu Arg Trp Glu Glu Glu  
145 150 155 160

Leu Ser Arg Gln Pro Ala Val Glu Glu Pro Ala Glu Val Thr Ala Thr  
165 170 175

Val Leu Ala Ser Arg Asp Asp His Gly Ala Pro Phe Ser Cys Arg Thr  
180 185 190

Glu Leu Asp Met Gln Pro Gln Gly Leu Gly Leu Phe Val Asn Thr Ser  
195 200 205

Ala Pro Arg Gln Leu Arg Thr Phe Val Leu Pro Val Thr Pro Pro Arg  
210 215 220

Leu Val Ala Pro Arg Phe Leu Glu Val Glu Thr Ser Trp Pro Val Asp  
225 230 235 240

Cys Thr Leu Asp Gly Leu Phe Pro Ala Ser Glu Ala Gln Val Tyr Leu  
245 250 255

Ala Leu Gly Asp Gln Met Leu Asn Ala Thr Val Met Asn His Gly Asp  
 260 265 270  
 Thr Leu Thr Ala Thr Ala Thr Ala Thr Ala Arg Ala Asp Gln Glu Gly  
 275 280 285  
 Ala Arg Glu Ile Val Cys Asn Val Thr Leu Gly Gly Glu Arg Arg Glu  
 290 295 300  
 Ala Arg Glu Asn Leu Thr Val Phe Ser Phe Leu Gly Pro Ile Val Asn  
 305 310 315 320  
 Leu Ser Glu Pro Thr Ala His Glu Gly Ser Thr Val Thr Val Ser Cys  
 325 330 335  
 Met Ala Gly Ala Arg Val Gln Val Thr Leu Asp Gly Val Pro Ala Ala  
 340 345 350  
 Ala Pro Gly Gln Pro Ala Gln Leu Gln Leu Asn Ala Thr Glu Ser Asp  
 355 360 365  
 Asp Gly Arg Ser Phe Phe Cys Ser Ala Thr Leu Glu Val Asp Gly Glu  
 370 375 380  
 Phe Leu His Arg Asn Ser Ser Val Gln Leu Arg Val Leu Tyr Gly Pro  
 385 390 395 400  
 Lys Ile Asp Arg Ala Thr Cys Pro Gln His Leu Lys Trp Lys Asp Lys  
 405 410 415  
 Thr Arg His Val Leu Gln Cys Gln Ala Arg Gly Asn Pro Tyr Pro Glu  
 420 425 430  
 Leu Arg Cys Leu Lys Glu Gly Ser Ser Arg Glu Val Pro Val Gly Ile  
 435 440 445  
 Pro Phe Phe Val Asn Val Thr His Asn Gly Thr Tyr Gln Cys Gln Ala  
 450 455 460  
 Ser Ser Ser Arg Gly Lys Tyr Thr Leu Val Val Val Met Asp Ile Glu  
 465 470 475 480  
 Ala Gly Ser Ser His Phe Val Pro Val Phe Val Ala Val Leu Leu Thr  
 485 490 495  
 Leu Gly Val Val Thr Ile Val Leu Ala Leu Met Tyr Val Phe Arg Glu  
 500 505 510  
 His Gln Arg Ser Gly Ser Tyr His Val Arg Glu Glu Ser Thr Tyr Leu  
 515 520 525  
 Pro Leu Thr Ser Met Gln Pro Thr Glu Ala Met Gly Glu Glu Pro Ser  
 530 535 540  
 Arg Ala Glu  
 545

<210> 66  
 <211> 577  
 <212> PRT  
 <213> Homo sapiens

<400> 66

Gly	Val	Pro	Glu	Glu	Leu	Phe	Glu	Val	Ser	Ile	Trp	Pro	Ser	Gln	Ala	1	5	10	15
Leu	Val	Glu	Phe	Gly	Gln	Ser	Leu	Val	Val	Asn	Cys	Ser	Thr	Thr	Cys	20	25	30	
Pro	Asp	Pro	Gly	Pro	Ser	Gly	Ile	Glu	Thr	Phe	Leu	Lys	Lys	Thr	Gln	35	40	45	
Val	Gly	Lys	Gly	Pro	Gln	Trp	Lys	Glu	Phe	Leu	Leu	Glu	Asp	Val	Thr	50	55	60	
Glu	Asn	Ser	Ile	Leu	Gln	Cys	Phe	Phe	Ser	Cys	Ala	Gly	Ile	Gln	Lys	65	70	75	80
Asp	Thr	Ser	Leu	Gly	Ile	Thr	Val	Tyr	Gln	Pro	Pro	Glu	Gln	Val	Ile	85	90	95	
Leu	Glu	Leu	Gln	Pro	Ala	Trp	Val	Ala	Val	Asp	Glu	Ala	Phe	Thr	Val	100	105	110	
Lys	Cys	His	Val	Pro	Ser	Val	Ala	Pro	Leu	Glu	Ser	Leu	Thr	Leu	Ala	115	120	125	
Leu	Leu	Gln	Gly	Asn	Gln	Glu	Leu	His	Arg	Lys	Asn	Phe	Thr	Ser	Leu	130	135	140	
Ala	Val	Ala	Ser	Gln	Arg	Ala	Glu	Val	Ile	Ile	Ser	Val	Arg	Ala	Gln	145	150	155	160
Lys	Glu	Asn	Asp	Arg	Cys	Asn	Ser	Ser	Cys	His	Ala	Glu	Leu	Asp	Leu	165	170	175	
Ser	Leu	Gln	Gly	Gly	Arg	Leu	Phe	Gln	Gly	Ser	Ser	Pro	Ile	Arg	Ile	180	185	190	
Val	Arg	Ile	Phe	Glu	Phe	Ser	Gln	Ser	Pro	His	Ile	Trp	Val	Ser	Ser	195	200	205	
Leu	Leu	Glu	Ala	Gly	Met	Ala	Glu	Thr	Val	Ser	Cys	Glu	Val	Ala	Arg	210	215	220	
Val	Phe	Pro	Ala	Lys	Glu	Val	Met	Phe	His	Met	Phe	Leu	Glu	Asp	Gln	225	230	235	240
Glu	Leu	Ser	Ser	Phe	Leu	Ser	Trp	Glu	Gly	Asp	Thr	Ala	Trp	Ala	Asn	245	250	255	
Ala	Thr	Ile	Arg	Thr	Met	Glu	Ala	Gly	Asp	Gln	Glu	Leu	Ser	Cys	Phe	260	265	270	

Ala Ser Leu Gly Ala Met Glu Gln Lys Thr Arg Lys Leu Val His Ser  
 275 280 285  
 Tyr Asn Lys Trp Pro Gly Ser Ser Phe Phe Ile Arg Val Leu Cys Cys  
 290 295 300  
 Lys His Arg Val Thr Gly Trp Phe Gly Cys Arg His Pro Cys Cys Pro  
 305 310 315 320  
 Leu Leu Gly Met Leu Ser Ser Glu His Glu Ser Ser Ser Phe Ser Gly  
 325 330 335  
 Phe Pro Pro Pro Ile Leu Glu Leu Lys Glu Ser Tyr Pro Leu Ala Gly  
 340 345 350  
 Thr Asp Ile Asn Val Thr Cys Ser Gly His Val Leu Thr Ser Pro Ser  
 355 360 365  
 Pro Thr Leu Arg Leu Gln Gly Ala Pro Asp Leu Pro Ala Gly Glu Pro  
 370 375 380  
 Ala Trp Leu Leu Leu Thr Ala Arg Glu Glu Asp Asp Gly Asn Phe Ser  
 385 390 395 400  
 Cys Glu Ala Ser Leu Val Val Gln Gly Gln Arg Leu Met Lys Thr Thr  
 405 410 415  
 Val Ile Gln Leu His Ile Leu Cys Lys Pro Gln Leu Glu Glu Ser Ser  
 420 425 430  
 Cys Pro Gly Lys Gln Thr Trp Leu Glu Gly Met Glu His Thr Leu Ala  
 435 440 445  
 Cys Val Pro Lys Gly Asn Pro Ala Pro Ala Leu Val Cys Thr Trp Asn  
 450 455 460  
 Gly Val Val Phe Asp Leu Glu Val Pro Gln Lys Ala Thr Asn His Thr  
 465 470 475 480  
 Gly Thr Tyr Arg Tyr Thr Ala Thr Asn Gln Leu Gly Ser Val Ser Lys  
 485 490 495  
 Asp Ile Ala Val Ile Val Gln Gly Leu Asp Glu Gly Ile Ser Ser Thr  
 500 505 510  
 Leu Phe Val Ile Ile Thr Val Ala Leu Gly Val Gly Val Ile Thr Ile  
 515 520 525  
 Ala Leu Tyr Leu Ser Tyr Arg Pro Cys Lys Val Asp Arg Arg Lys Leu  
 530 535 540  
 Leu Tyr Arg Gln Lys Glu Glu Asp Lys Glu Glu Glu Ser Gln Phe Ala  
 545 550 555 560  
 Val Gln Glu Glu Lys Ser Thr Thr His Ile Ile Asp Ser Tyr Leu Ile  
 565 570 575  
 Glu

<400> 67

Ala Ala Leu Gly Leu Gly Leu Phe Gly Leu Ser Ala Val Ser Gln Glu  
20 25 30

Pro Phe Trp Ala Asp Leu Gln Pro Arg Val Ala Phe Val Glu Arg Gly  
35 40 45

Gly Ser Leu Trp Leu Asn Cys Ser Thr Asn Cys Pro Arg Pro Glu Arg  
50 55 60

Gly Gly Leu Glu Thr Ser Leu Arg Arg Asn Gly Thr Gln Arg Gly Leu  
65 70 75 80

Arg Trp Leu Ala Arg Gln Leu Val Asp Ile Arg Glu Pro Glu Thr Gln  
85 90 95

Pro Val Cys Phe Phe Arg Cys Ala Arg Arg Thr Leu Gln Ala Arg Gly  
100 105 110

Leu Ile Arg Thr Phe Gln Arg Pro Asp Arg Val Glu Leu Met Pro Leu  
115 120 125

Pro	Pro	Trp	Gln	Pro	Val	Gly	Glu	Asn	Phe	Thr	Leu	Ser	Cys	Arg	Val
	130					135					140				

Pro Gly Ala Gly Pro Arg Ala Ser Leu Thr Leu Thr Leu Leu Arg Gly  
145 150 155 160

Ala Gln Glu Leu Ile Arg Arg Ser Phe Ala Gly Glu Pro Pro Arg Ala  
165 170 175

Arg Gly Ala Val Leu Thr Ala Thr Val Leu Ala Arg Arg Glu Asp His  
180 185 190

Gly Ala Asn Phe Ser Cys Arg Ala Glu Leu Asp Leu Arg Pro His Gly  
195 200 205

Leu Gly Leu Phe Glu Asn Ser Ser Ala Pro Arg Glu Leu Arg Thr Phe  
210 215 220

Ser Leu Ser Pro Asp Ala Pro Arg Leu Ala Ala Pro Arg Leu Leu Glu  
225 230 235 240

Val Gly Ser Glu Arg Pro Val Ser Cys Thr Leu Asp Gly Leu Phe Pro  
245 250 255

Ala Ser Glu Ala Arg Val Tyr Leu Ala Leu Gly Asp Gln Asn Leu Ser  
260 265 270

Pro Asp Val Thr Leu Glu Gly Asp Ala Phe Val Ala Thr Ala Thr Ala  
 275 280 285  
 Thr Ala Ser Ala Glu Gln Glu Gly Ala Arg Gln Leu Ile Cys Asn Val  
 290 295 300  
 Thr Leu Gly Gly Glu Asn Arg Glu Thr Arg Glu Asn Val Thr Ile Tyr  
 305 310 315 320  
 Ser Phe Pro Ala Pro Leu Leu Thr Leu Ser Glu Pro Ser Val Ser Glu  
 325 330 335  
 Gly Gln Met Val Thr Val Thr Cys Ala Ala Gly Thr Gln Ala Leu Val  
 340 345 350  
 Thr Leu Glu Gly Val Pro Ala Ala Val Pro Gly Gln Pro Ala Gln Leu  
 355 360 365  
 Gln Leu Asn Ala Thr Glu Asn Asp Asp Arg Arg Ser Phe Phe Cys Asp  
 370 375 380  
 Ala Thr Leu Asp Val Asp Gly Glu Thr Leu Ile Lys Asn Arg Ser Ala  
 385 390 395 400  
 Glu Leu Arg Val Leu Tyr Ala Pro Arg Leu Asp Asp Ser Asp Cys Pro  
 405 410 415  
 Arg Ser Trp Thr Trp Pro Glu Gly Pro Glu Gln Thr Leu Arg Cys Glu  
 420 425 430  
 Ala Arg Gly Asn Pro Glu Pro Ser Val His Cys Ala Arg Ser Asp Gly  
 435 440 445  
 Gly Ala Val Leu Ala Leu Gly Leu Leu Gly Pro Val Thr Arg Ala Leu  
 450 455 460  
 Ser Gly Thr Tyr Arg Cys Lys Ala Ala Asn Asp Gln Gly Glu Ala Val  
 465 470 475 480  
 Lys Asp Val Thr Leu Thr Val Glu Tyr Ala Pro Ala Leu Asp Ser Val  
 485 490 495  
 Gly Cys Pro Glu Arg Ile Thr Trp Leu Glu Gly Thr Glu Ala Ser Leu  
 500 505 510  
 Ser Cys Val Ala His Gly Val Pro Pro Pro Asp Val Ile Cys Val Arg  
 515 520 525  
 Ser Gly Glu Leu Gly Ala Val Ile Glu Gly Leu Leu Arg Val Ala Arg  
 530 535 540  
 Glu His Ala Gly Thr Tyr Arg Cys Glu Ala Thr Asn Pro Arg Gly Ser  
 545 550 555 560  
 Ala Ala Lys Asn Val Ala Val Thr Val Glu Tyr Gly Pro Arg Phe Glu  
 565 570 575

Glu Pro Ser Cys Pro Ser Asn Trp Thr Trp Val Glu Gly Ser Gly Arg  
 580 585 590  
 Leu Phe Ser Cys Glu Val Asp Gly Lys Pro Gln Pro Ser Val Lys Cys  
 595 600 605  
 Val Gly Ser Gly Gly Ala Thr Glu Gly Val Leu Leu Pro Leu Ala Pro  
 610 615 620  
 Pro Asp Pro Ser Pro Arg Ala Pro Arg Ile Pro Arg Val Leu Ala Pro  
 625 630 635 640  
 Gly Ile Tyr Val Cys Asn Ala Thr Asn Arg His Gly Ser Val Ala Lys  
 645 650 655  
 Thr Val Val Val Ser Ala Glu Ser Pro Pro Glu Met Asp Glu Ser Thr  
 660 665 670  
 Cys Pro Ser His Gln Thr Trp Leu Glu Gly Ala Glu Ala Ser Ala Leu  
 675 680 685  
 Ala Cys Ala Ala Arg Gly Arg Pro Ser Pro Gly Val Arg Cys Ser Arg  
 690 695 700  
 Glu Gly Ile Pro Trp Pro Glu Gln Gln Arg Val Ser Arg Glu Asp Ala  
 705 710 715 720  
 Gly Thr Tyr His Cys Val Ala Thr Asn Ala His Gly Thr Asp Ser Arg  
 725 730 735  
 Thr Val Thr Val Gly Val Glu Tyr Arg Pro Val Val Ala Glu Leu Ala  
 740 745 750  
 Ala Ser Pro Pro Gly Gly Val Arg Pro Gly Gly Asn Phe Thr Leu Thr  
 755 760 765  
 Cys Arg Ala Glu Ala Trp Pro Pro Ala Gln Ile Ser Trp Arg Ala Pro  
 770 775 780  
 Pro Gly Ala Leu Asn Ile Gly Leu Ser Ser Asn Asn Ser Thr Leu Ser  
 785 790 795 800  
 Val Ala Gly Ala Met Gly Ser His Gly Gly Glu Tyr Glu Cys Ala Arg  
 805 810 815  
 Thr Asn Ala His Gly Arg His Ala Arg Arg Ile Thr Val Arg Val Ala  
 820 825 830  
 Gly Pro Trp Leu Trp Val Ala Val Gly Gly Ala Ala Gly Gly Ala Ala  
 835 840 845  
 Leu Leu Ala Ala Gly Ala Gly Leu Ala Phe Tyr Val Gln Ser Thr Ala  
 850 855 860  
 Cys Lys Lys Gly Glu Tyr Asn Val Gln Glu Ala Glu Ser Ser Gly Glu  
 865 870 875 880

Arg Leu Pro Gly Leu Glu Leu Ser His Arg Gln Ala Ile Pro Val Leu  
210 215 220

His Ser Pro Thr Ser Pro Glu Pro Pro Asp Thr Thr Ser Pro Glu Pro  
 225 230 235 240  
 Pro Asn Thr Thr Ser Pro Glu Ser Pro Asp Thr Thr Ser Pro Glu Ser  
 245 250 255  
 Pro Asp Thr Thr Ser Gln Glu Pro Pro Asp Thr Thr Ser Gln Glu Pro  
 260 265 270  
 Pro Asp Thr Thr Ser Gln Glu Pro Pro Asp Thr Thr Ser Pro Glu Pro  
 275 280 285  
 Pro Asp Lys Thr Ser Pro Glu Pro Ala Pro Gln Gln Gly Ser Thr His  
 290 295 300  
 Thr Pro Arg Ser Pro Gly Ser Thr Arg Thr Arg Arg Pro Glu Ile Ser  
 305 310 315 320  
 Gln Ala Gly Pro Thr Gln Gly Glu Val Ile Pro Thr Gly Ser Ser Lys  
 325 330 335  
 Pro Ala Gly Asp Gln Leu Pro Ala Ala Leu Trp Thr Ser Ser Ala Val  
 340 345 350  
 Leu Gly Leu Leu Leu Leu Ala Leu Pro Thr Tyr His Leu Trp Lys Arg  
 355 360 365  
 Cys Arg His Leu Ala Glu Asp Asp Thr His Pro Pro Ala Ser Leu Arg  
 370 375 380  
 Leu Leu Pro Gln Val Ser Ala Trp Ala Gly Leu Arg Gly Thr Gly Gln  
 385 390 395 400  
 Val Gly Ile Ser Pro Ser  
 405

<210> 69  
 <211> 739  
 <212> PRT  
 <213> Homo sapiens

<400> 69  
 Met Pro Gly Lys Met Val Val Ile Leu Gly Ala Ser Asn Ile Leu Trp  
 1 5 10 15  
 Ile Met Phe Ala Ala Ser Gln Ala Phe Lys Ile Glu Thr Thr Pro Glu  
 20 25 30  
 Ser Arg Tyr Leu Ala Gln Ile Gly Asp Ser Val Ser Leu Thr Cys Ser  
 35 40 45  
 Thr Thr Gly Cys Glu Ser Pro Phe Phe Ser Trp Arg Thr Gln Ile Asp  
 50 55 60  
 Ser Pro Leu Asn Gly Lys Val Thr Asn Glu Gly Thr Thr Ser Thr Leu  
 65 70 75 80

Thr	Met	Asn	Pro	Val	Ser	Phe	Gly	Asn	Glu	His	Ser	Tyr	Leu	Cys	Thr	85	90	95
Ala	Thr	Cys	Glu	Ser	Arg	Lys	Leu	Glu	Lys	Gly	Ile	Gln	Val	Glu	Ile	100	105	110
Tyr	Ser	Phe	Pro	Lys	Asp	Pro	Glu	Ile	His	Leu	Ser	Gly	Pro	Leu	Glu	115	120	125
Ala	Gly	Lys	Pro	Ile	Thr	Val	Lys	Cys	Ser	Val	Ala	Asp	Val	Tyr	Pro	130	135	140
Phe	Asp	Arg	Leu	Glu	Ile	Asp	Leu	Leu	Lys	Gly	Asp	His	Leu	Met	Lys	145	150	155
Ser	Gln	Glu	Phe	Leu	Glu	Asp	Ala	Asp	Arg	Lys	Ser	Leu	Glu	Thr	Lys	165	170	175
Ser	Leu	Glu	Val	Thr	Phe	Thr	Pro	Val	Ile	Glu	Asp	Ile	Gly	Lys	Val	180	185	190
Leu	Val	Cys	Arg	Ala	Lys	Leu	His	Ile	Asp	Glu	Met	Asp	Ser	Val	Pro	195	200	205
Thr	Val	Arg	Gln	Ala	Val	Lys	Glu	Leu	Gln	Val	Tyr	Ile	Ser	Pro	Lys	210	215	220
Asn	Thr	Val	Ile	Ser	Val	Asn	Pro	Ser	Thr	Lys	Leu	Gln	Glu	Gly	Gly	225	230	235
Ser	Val	Thr	Met	Thr	Cys	Ser	Ser	Glu	Gly	Leu	Pro	Ala	Pro	Glu	Ile	245	250	255
Phe	Trp	Ser	Lys	Lys	Leu	Asp	Asn	Gly	Asn	Leu	Gln	His	Leu	Ser	Gly	260	265	270
Asn	Ala	Thr	Leu	Thr	Leu	Ile	Ala	Met	Arg	Met	Glu	Asp	Ser	Gly	Ile	275	280	285
Tyr	Val	Cys	Glu	Gly	Val	Asn	Leu	Ile	Gly	Lys	Asn	Arg	Lys	Glu	Val	290	295	300
Glu	Leu	Ile	Val	Gln	Glu	Lys	Pro	Phe	Thr	Val	Glu	Ile	Ser	Pro	Gly	305	310	315
Pro	Arg	Ile	Ala	Ala	Gln	Ile	Gly	Asp	Ser	Val	Met	Leu	Thr	Cys	Ser	325	330	335
Val	Met	Gly	Cys	Glu	Ser	Pro	Ser	Phe	Ser	Trp	Arg	Thr	Gln	Ile	Asp	340	345	350
Ser	Pro	Leu	Ser	Gly	Lys	Val	Arg	Ser	Glu	Gly	Thr	Asn	Ser	Thr	Leu	355	360	365
Thr	Leu	Ser	Pro	Val	Ser	Phe	Glu	Asn	Glu	His	Ser	Tyr	Leu	Cys	Thr	370	375	380

Val	Thr	Cys	Gly	His	Lys	Lys	Leu	Glu	Lys	Gly	Ile	Gln	Val	Glu	Leu	385	390	395	400
Tyr	Ser	Phe	Pro	Arg	Asp	Pro	Glu	Ile	Glu	Met	Ser	Gly	Gly	Leu	Val	405	410		415
Asn	Gly	Ser	Ser	Val	Thr	Val	Ser	Cys	Lys	Val	Pro	Ser	Val	Tyr	Pro	420	425		430
Leu	Asp	Arg	Leu	Glu	Ile	Glu	Leu	Leu	Lys	Gly	Glu	Thr	Ile	Leu	Glu	435	440		445
Asn	Ile	Glu	Phe	Leu	Glu	Asp	Thr	Asp	Met	Lys	Ser	Leu	Glu	Asn	Lys	450	455		460
Ser	Leu	Glu	Met	Thr	Phe	Ile	Pro	Thr	Ile	Glu	Asp	Thr	Gly	Lys	Ala	465	470		480
Leu	Val	Cys	Gln	Ala	Lys	Leu	His	Ile	Asp	Asp	Met	Glu	Phe	Glu	Pro	485	490		495
Lys	Gln	Arg	Gln	Ser	Thr	Gln	Thr	Leu	Tyr	Val	Asn	Val	Ala	Pro	Arg	500	505		510
Asp	Thr	Thr	Val	Leu	Val	Ser	Pro	Ser	Ser	Ile	Leu	Glu	Glu	Gly	Ser	515	520		525
Ser	Val	Asn	Met	Thr	Cys	Leu	Ser	Gln	Gly	Phe	Pro	Ala	Pro	Lys	Ile	530	535		540
Leu	Trp	Ser	Arg	Gln	Leu	Pro	Asn	Gly	Glu	Leu	Gln	Pro	Leu	Ser	Glu	545	550		560
Asn	Ala	Thr	Leu	Thr	Leu	Ile	Ser	Thr	Lys	Met	Glu	Asp	Ser	Gly	Val	565	570		575
Tyr	Leu	Cys	Glu	Gly	Ile	Asn	Gln	Ala	Gly	Arg	Ser	Arg	Lys	Glu	Val	580	585		590
Glu	Leu	Ile	Ile	Gln	Val	Thr	Pro	Lys	Asp	Ile	Lys	Leu	Thr	Ala	Phe	595	600		605
Pro	Ser	Glu	Ser	Val	Lys	Glu	Gly	Asp	Thr	Val	Ile	Ile	Ser	Cys	Thr	610	615		620
Cys	Gly	Asn	Val	Pro	Glu	Thr	Trp	Ile	Ile	Leu	Lys	Lys	Lys	Ala	Glu	625	630		640
Thr	Gly	Asp	Thr	Val	Leu	Lys	Ser	Ile	Asp	Gly	Ala	Tyr	Thr	Ile	Arg	645	650		655
Lys	Ala	Gln	Leu	Lys	Asp	Ala	Gly	Val	Tyr	Glu	Cys	Glu	Ser	Lys	Asn	660	665		670
Lys	Val	Gly	Ser	Gln	Leu	Arg	Ser	Leu	Thr	Leu	Asp	Val	Gln	Gly	Arg	675	680		685

Glu Asn Asn Lys Asp Tyr Phe Ser Pro Glu Leu Leu Val Leu Tyr Phe  
 690 695 700

Ala Ser Ser Leu Ile Ile Pro Ala Ile Gly Met Ile Ile Tyr Phe Ala  
 705 710 715 720

Arg Lys Ala Asn Met Lys Gly Ser Tyr Ser Leu Val Glu Ala Gln Lys  
 725 730 735

Ser Lys Val

<210> 70

<211> 537

<212> PRT

<213> Mus musculus

<400> 70

Met Ala Ser Thr Arg Ala Lys Pro Thr Leu Pro Leu Leu Leu Ala Leu  
 1 5 10 15

Val Thr Val Val Ile Pro Gly Pro Gly Asp Ala Gln Val Ser Ile His  
 20 25 30

Pro Arg Glu Ala Phe Leu Pro Gln Gly Gly Ser Val Gln Val Asn Cys  
 35 40 45

Ser Ser Ser Cys Lys Glu Asp Leu Ser Leu Gly Leu Glu Thr Gln Trp  
 50 55 60

Leu Lys Asp Glu Leu Glu Ser Gly Pro Asn Trp Lys Leu Phe Glu Leu  
 65 70 75 80

Ser Glu Ile Gly Glu Asp Ser Ser Pro Leu Cys Phe Glu Asn Cys Gly  
 85 90 95

Thr Val Gln Ser Ser Ala Ser Ala Thr Ile Thr Val Tyr Ser Phe Pro  
 100 105 110

Glu Ser Val Glu Leu Arg Pro Leu Pro Ala Trp Gln Gln Val Gly Lys  
 115 120 125

Asp Leu Thr Leu Arg Cys His Val Asp Gly Gly Ala Pro Arg Thr Gln  
 130 135 140

Leu Ser Ala Val Leu Leu Arg Gly Glu Glu Ile Leu Ser Arg Gln Pro  
 145 150 155 160

Val Gly Gly His Pro Lys Asp Pro Lys Glu Ile Thr Phe Thr Val Leu  
 165 170 175

Ala Ser Arg Gly Asp His Gly Ala Asn Phe Ser Cys Arg Thr Glu Leu  
 180 185 190

Asp Leu Arg Pro Gln Gly Leu Ala Leu Phe Ser Asn Val Ser Glu Ala  
 195 200 205

Arg	Ser	Leu	Arg	Thr	Phe	Asp	Leu	Pro	Ala	Thr	Ile	Pro	Lys	Leu	Asp	210	215	220	
Thr	Pro	Asp	Leu	Leu	Glu	Val	Gly	Thr	Gln	Gln	Lys	Leu	Phe	Cys	Ser	225	230	235	240
Leu	Glu	Gly	Leu	Phe	Pro	Ala	Ser	Glu	Ala	Arg	Ile	Tyr	Leu	Glu	Leu	245	250	255	
Gly	Gly	Gln	Met	Pro	Thr	Gln	Glu	Ser	Thr	Asn	Ser	Ser	Asp	Ser	Val	260	265	270	
Ser	Ala	Thr	Ala	Leu	Val	Glu	Val	Thr	Glu	Glu	Phe	Asp	Arg	Thr	Leu	275	280	285	
Pro	Leu	Arg	Cys	Val	Leu	Glu	Leu	Ala	Asp	Gln	Ile	Leu	Glu	Thr	Gln	290	295	300	
Arg	Thr	Leu	Thr	Val	Tyr	Asn	Phe	Ser	Ala	Pro	Val	Leu	Thr	Leu	Ser	305	310	315	320
Gln	Leu	Glu	Val	Ser	Glu	Gly	Ser	Gln	Val	Thr	Val	Lys	Cys	Glu	Ala	325	330	335	
His	Ser	Gly	Ser	Lys	Val	Val	Leu	Leu	Ser	Gly	Val	Glu	Pro	Arg	Pro	340	345	350	
Pro	Thr	Pro	Gln	Val	Gln	Phe	Thr	Leu	Asn	Ala	Ser	Ser	Glu	Asp	His	355	360	365	
Lys	Arg	Ser	Phe	Phe	Cys	Ser	Ala	Ala	Leu	Glu	Val	Ala	Gly	Lys	Phe	370	375	380	
Leu	Phe	Lys	Asn	Gln	Thr	Leu	Glu	Leu	His	Val	Leu	Tyr	Gly	Pro	Arg	385	390	395	400
Leu	Asp	Glu	Thr	Asp	Cys	Leu	Gly	Asn	Trp	Thr	Trp	Gln	Glu	Gly	Ser	405	410	415	
Gln	Gln	Thr	Leu	Lys	Cys	Gln	Ala	Trp	Gly	Asn	Pro	Ser	Pro	Lys	Met	420	425	430	
Thr	Cys	Arg	Arg	Lys	Ala	Asp	Gly	Ala	Leu	Leu	Pro	Ile	Gly	Val	Val	435	440	445	
Lys	Ser	Val	Lys	Gln	Glu	Met	Asn	Gly	Thr	Tyr	Val	Cys	His	Ala	Phe	450	455	460	
Ser	Ser	His	Gly	Asn	Val	Thr	Arg	Asn	Val	Tyr	Leu	Thr	Val	Leu	Tyr	465	470	475	480
His	Ser	Gln	Asn	Asn	Trp	Thr	Ile	Ile	Ile	Leu	Val	Pro	Val	Leu	Leu	485	490	495	
Val	Ile	Val	Gly	Leu	Val	Met	Ala	Ala	Ser	Tyr	Val	Tyr	Asn	Arg	Gln	500	505	510	

Arg Lys Ile Arg Ile Tyr Lys Leu Gln Lys Ala Gln Glu Glu Ala Ile  
 515 520 525

Lys Leu Lys Gly Gln Ala Pro Pro Pro  
 530 535

<210> 71

<211> 537

<212> PRT

<213> Mus musculus

<400> 71

Met Ala Ser Thr Arg Ala Lys Pro Thr Leu Pro Leu Leu Leu Ala Leu  
 1 5 10 15

Val Thr Val Val Ile Pro Gly Pro Gly Asp Ala Gln Val Ser Ile His  
 20 25 30

Pro Arg Glu Ala Phe Leu Pro Gln Gly Gly Ser Val Gln Val Asn Cys  
 35 40 45

Ser Ser Ser Cys Lys Glu Asp Leu Ser Leu Gly Leu Glu Thr Gln Trp  
 50 55 60

Leu Lys Asp Glu Leu Glu Ser Gly Pro Asn Trp Lys Leu Phe Glu Leu  
 65 70 75 80

Ser Glu Ile Gly Glu Asp Ser Ser Pro Leu Cys Phe Glu Asn Cys Gly  
 85 90 95

Thr Val Gln Ser Ser Ala Ser Ala Thr Ile Thr Val Tyr Ser Phe Pro  
 100 105 110

Glu Ser Val Glu Leu Arg Pro Leu Pro Ala Trp Gln Gln Val Gly Lys  
 115 120 125

Asp Leu Thr Leu Arg Cys His Val Asp Gly Gly Ala Pro Arg Thr Gln  
 130 135 140

Leu Ser Ala Val Leu Leu Arg Gly Glu Glu Ile Leu Ser Arg Gln Pro  
 145 150 155 160

Val Gly Gly His Pro Lys Asp Pro Lys Glu Ile Thr Phe Thr Val Leu  
 165 170 175

Ala Ser Arg Gly Asp His Gly Ala Asn Phe Ser Cys Arg Thr Glu Leu  
 180 185 190

Asp Leu Arg Pro Gln Gly Leu Ala Leu Phe Ser Asn Val Ser Glu Ala  
 195 200 205

Arg Ser Leu Arg Thr Phe Asp Leu Pro Ala Thr Ile Pro Lys Leu Asp  
 210 215 220

Thr Pro Asp Leu Leu Glu Val Gly Thr Gln Gln Lys Leu Phe Cys Ser  
 225 230 235 240

Leu Glu Ala Leu Phe Pro Ala Ser Glu Ala Arg Ile Tyr Leu Glu Leu  
 245 250 255  
 Gly Gly Gln Met Pro Thr Gln Glu Ser Thr Asn Ser Ser Asp Ser Val  
 260 265 270  
 Ser Ala Thr Ala Leu Val Glu Val Thr Glu Glu Phe Asp Arg Thr Leu  
 275 280 285  
 Pro Leu Arg Cys Val Leu Glu Leu Ala Asp Gln Ile Leu Glu Thr Gln  
 290 295 300  
 Arg Thr Leu Thr Val Tyr Asn Phe Ser Ala Pro Val Leu Thr Leu Ser  
 305 310 315 320  
 Gln Leu Glu Val Ser Glu Gly Ser Gln Val Thr Val Lys Cys Glu Ala  
 325 330 335  
 His Ser Gly Ser Lys Val Val Leu Leu Ser Gly Val Glu Pro Arg Pro  
 340 345 350  
 Pro Thr Pro Gln Val Gln Phe Thr Leu Asn Ala Ser Ser Glu Asp His  
 355 360 365  
 Lys Arg Ser Phe Phe Cys Ser Ala Ala Leu Glu Val Ala Gly Lys Phe  
 370 375 380  
 Leu Phe Lys Asn Gln Thr Leu Glu Leu His Val Leu Tyr Gly Pro Arg  
 385 390 395 400  
 Leu Asp Glu Thr Asp Cys Leu Gly Asn Trp Thr Trp Gln Glu Gly Ser  
 405 410 415  
 Gln Gln Thr Leu Lys Cys Gln Ala Trp Gly Asn Pro Ser Pro Lys Met  
 420 425 430  
 Thr Cys Arg Arg Lys Ala Asp Gly Ala Leu Leu Pro Ile Gly Val Val  
 435 440 445  
 Lys Ser Val Lys Gln Glu Met Asn Gly Thr Tyr Val Cys His Ala Phe  
 450 455 460  
 Ser Ser His Gly Asn Val Thr Arg Asn Val Tyr Leu Thr Val Leu Tyr  
 465 470 475 480  
 His Ser Gln Asn Asn Trp Thr Ile Ile Ile Leu Val Pro Val Leu Leu  
 485 490 495  
 Val Ile Val Gly Leu Val Met Ala Ala Ser Tyr Val Tyr Asn Arg Gln  
 500 505 510  
 Arg Lys Ile Arg Ile Tyr Lys Leu Gln Lys Ala Gln Glu Glu Ala Ile  
 515 520 525  
 Lys Leu Lys Gly Gln Ala Pro Pro Pro  
 530 535

&lt;210&gt; 72

&lt;211&gt; 527

&lt;212&gt; PRT

<213> *Cricetulus griseus*

&lt;400&gt; 72

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Met Ala Pro Thr Arg Ala Arg Pro Thr Pro Pro Leu Leu Leu Ala Leu
  1                      5                      10                      15

Val Ala Val Val Ile Pro Gly Pro Gly Ser Ala Gln Val Ser Ile His
      20                      25                      30

Pro Lys Glu Ala Phe Leu Pro Arg Gly Ala Ser Met Gln Val Asn Cys
      35                      40                      45

Ser Ser Ser Cys Ser Glu Asn Leu Ser Leu Gly Leu Glu Thr Gln Trp
  50                      55                      60

Pro Lys Val Glu Leu Asp His Gly His Asn Trp Lys Leu Phe Glu Leu
  65                      70                      75                      80

Ser Asp Ile Gly Asp Asp Ser Lys Pro Leu Cys Phe Glu Asn Cys Gly
      85                      90                      95

Pro Ile Gln Ser Ser Ala Ser Ala Thr Ile Val Leu Tyr Ser Phe Pro
      100                      105                      110

Glu Arg Val Glu Leu Asp Arg Leu Pro Thr Trp Gln Pro Val Gly Lys
      115                      120                      125

Asn Leu Thr Leu Arg Cys Leu Val Asp Gly Gly Thr Pro Arg Ser Gln
      130                      135                      140

Leu Ser Val Lys Leu Leu Arg Gly Gly Glu Val Leu His Gln Glu Pro
      145                      150                      155                      160

Val Gly Val Asp Ser Arg Asn Pro Lys Glu Val Thr Val Thr Val Leu
      165                      170                      175

Ala Ser Arg Asp Asp His Gly Ala Asn Phe Ser Cys Arg Thr Glu Leu
      180                      185                      190

Asp Leu Arg Pro Gln Gly Leu Ala Leu Phe Pro Asn Val Ser Val Ile
      195                      200                      205

Arg Gln Leu Trp Thr Phe Asp Leu Pro Val Thr Glu Pro Lys Leu Asp
      210                      215                      220

Thr Pro Asp Leu Leu Glu Val Gly Thr Val Gln Lys Val Met Cys Ser
      225                      230                      235                      240

Leu Gly Gly Leu Phe Pro Ala Ala Glu Ala Arg Ile Thr Leu Glu Leu
      245                      250                      255

Gly Gly His Thr Leu Thr Ser Lys Ser Thr Asn His Arg Asp Leu Val
      260                      265                      270

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Ser Ala Thr Ala Leu Val Thr Ala Glu Met Glu Gly Thr Gln Gln Leu  
 275 280 285  
 Arg Cys Val Leu Glu Leu Ala Asp Gln Ile Leu Lys Ala Glu Arg Thr  
 290 295 300  
 Leu Ser Ile Tyr Asn Phe Ser Ala Pro Val Leu Thr Leu Ser Gln Gln  
 305 310 315 320  
 Glu Val Ser Glu Gly Ser Gln Val Thr Val Lys Cys Glu Ala Gln Gly  
 325 330 335  
 Gly Ala Gln Val Arg Leu Ser Gly Ala Pro Pro Gly Gln Val Gln Phe  
 340 345 350  
 Thr Leu Asn Ala Ser Ser Glu Asp His Glu Arg Ile Phe Thr Cys Ser  
 355 360 365  
 Ala Ala Leu Arg Val Ala Gly Gln Glu Leu Leu Lys Asn Gln Thr Leu  
 370 375 380  
 Lys Leu His Val Leu Tyr Gly Pro Arg Leu Asp Glu Asn Asp Cys Pro  
 385 390 395 400  
 Gly Asn Trp Thr Trp Pro Glu Gly Ser Gln Gln Asn Leu Ser Cys Gln  
 405 410 415  
 Ala Phe Gly Asn Pro Pro Pro Lys Leu Thr Cys Ser Arg Lys Thr Asp  
 420 425 430  
 Gly Ala Leu Leu Pro Ile Gly Glu Val Lys Thr Val Thr Trp Ala Met  
 435 440 445  
 Asn Gly Thr Tyr Val Cys His Ala Val Ser Ser His Gly Asn Ile Thr  
 450 455 460  
 Arg Glu Val Phe Leu Lys Val Leu Pro Lys Ser Pro Ile Trp Pro Ile  
 465 470 475 480  
 Ile Ile Ile Val Val Ile Leu Ala Thr Val Val Phe Val Gly Val Leu  
 485 490 495  
 Thr Ile Tyr Ile Tyr Asn Arg Gln Arg Lys Ile Arg Ile Tyr Lys Leu  
 500 505 510  
 Gln Arg Ala Gln Glu Glu Ala Met Lys Leu Lys Val Pro Pro His  
 515 520 525

&lt;210&gt; 73

&lt;211&gt; 544

&lt;212&gt; PRT

&lt;213&gt; Bos taurus

&lt;400&gt; 73

Met Ile Ala Ser Gly Pro Pro Pro Arg Val Tyr Trp Thr Ser Leu Ile  
 1 5 10 15

Phe Leu Leu Leu Ala Cys Cys Leu Leu Pro Thr Gly Ala Gln Gly Gln  
                     20                    25                    30  
 Thr Tyr Gln Val Arg Val Glu Pro Lys Asp Pro Val Val Pro Phe Gly  
                     35                    40                    45  
 Glu Pro Leu Val Val Asn Cys Thr Leu Asp Cys Pro Gly Pro Gly Leu  
                     50                    55                    60  
 Ile Ser Leu Glu Thr Ala Leu Ser Lys Glu Pro His Ser Arg Gly Leu  
                     65                    70                    75                    80  
 Gly Trp Ala Ala Phe Arg Leu Thr Asn Val Thr Gly Asp Met Glu Ile  
                     85                    90                    95  
 Leu Cys Ser Gly Ile Cys Asn Lys Ser Gln Val Val Gly Phe Ser Asn  
                     100                    105                    110  
 Ile Thr Val Phe Gly Phe Pro Lys Arg Val Glu Leu Ala Pro Leu Pro  
                     115                    120                    125  
 Leu Trp Gln Pro Val Gly Glu Glu Leu Asn Leu Ser Cys Leu Val Ser  
                     130                    135                    140  
 Gly Gly Ala Pro Arg Ala His Leu Ser Val Val Leu Leu Arg Gly Glu  
                     145                    150                    155                    160  
 Glu Glu Leu Gly Arg Gln Pro Leu Gly Lys Glu Glu Pro Ala Lys Val  
                     165                    170                    175  
 Thr Phe Met Val Gln Pro Arg Arg Glu Asp His Gly Thr Asn Phe Ser  
                     180                    185                    190  
 Cys Arg Ser Glu Leu Asp Leu Arg Ser Gln Gly Leu Glu Leu Phe Gln  
                     195                    200                    205  
 Asn Thr Ser Ala Pro Arg Lys Leu Gln Thr Tyr Ala Met Pro Lys Thr  
                     210                    215                    220  
 Ala Pro Arg Leu Val Phe Pro Arg Phe Trp Glu Met Glu Thr Ser Trp  
                     225                    230                    235                    240  
 Pro Val Asn Cys Ser Leu Asn Gly Leu Phe Pro Ala Ser Glu Ala His  
                     245                    250                    255  
 Ile Gln Leu Ala Leu Gly Asn Gln Met Leu Asn Ala Thr Val Val Ser  
                     260                    265                    270  
 His Ala Asp Thr Leu Thr Ala Thr Ala Thr Ala Lys Thr Glu Gln Glu  
                     275                    280                    285  
 Gly Thr Gln Glu Ile Val Cys Asn Val Thr Leu Gly Val Glu Asn Arg  
                     290                    295                    300  
 Glu Thr Arg Glu Ser Leu Val Ala Tyr Arg Phe Gln Gly Pro Asn Leu  
                     305                    310                    315                    320

Asn Leu Ser Glu Ser Asn Ala Thr Glu Gly Thr Pro Val Thr Val Thr  
 325 330 335  
 Cys Ala Ala Gly Pro Gln Val Gln Val Met Leu Asp Gly Val Pro Ala  
 340 345 350  
 Ala Val Pro Gly Gln Pro Ala Gln Leu Gln Leu Lys Ala Thr Glu Met  
 355 360 365  
 Asp Asp Arg Arg Thr Phe Phe Cys Asn Ala Thr Leu Lys Val His Gly  
 370 375 380  
 Val Thr Leu His Arg Asn Arg Ser Ile Gln Leu Arg Val Leu Tyr Gly  
 385 390 395 400  
 Pro Thr Ile Asp Arg Ala Lys Cys Pro Gln Arg Leu Met Trp Lys Glu  
 405 410 415  
 Lys Thr Met His Ile Leu Gln Cys Gln Ala Arg Gly Asn Pro Asn Pro  
 420 425 430  
 Gln Leu Gln Cys Leu Arg Glu Gly Ser Lys Phe Lys Val Pro Val Gly  
 435 440 445  
 Ile Pro Phe Leu Val Leu Leu Asn Tyr Ser Gly Thr Tyr Ser Cys Gln  
 450 455 460  
 Ala Ala Ser Ser Arg Gly Thr Asp Lys Met Leu Val Met Met Asp Val  
 465 470 475 480  
 Gln Gly Arg Asn Pro Val Thr Ile Asn Ile Val Leu Gly Val Leu Ala  
 485 490 495  
 Ile Leu Gly Leu Val Thr Leu Ala Ala Ala Ser Val Tyr Val Phe Trp  
 500 505 510  
 Val Gln Arg Gln His Asp Ile Tyr His Leu Thr Pro Arg Ser Thr Arg  
 515 520 525  
 Trp Arg Leu Thr Ser Thr Gln Pro Val Thr Val Ala Glu Glu Leu Ser  
 530 535 540  
  
 <210> 74  
 <211> 537  
 <212> PRT  
 <213> Sus scrofa  
  
 <400> 74  
 Met Ala Pro Gly Ala Thr His Pro Gly Gln Leu Ala Leu Leu Ala Leu  
 1 5 10 15  
 Leu Leu Pro Leu Leu Gly Ala Leu Leu Pro Gly Leu Gly Gly Ala Glu  
 20 25 30  
 Ile Ser Met Trp Pro Leu Asn Thr Ile Ile Pro Lys Gly Gly Ser Met  
 35 40 45

Lys	Val	Asn	Cys	Ser	Val	Ala	Cys	Asp	Gly	Asn	Ile	Thr	Ser	Phe	Gly	50	55	60
Leu	Glu	Thr	His	Trp	His	Lys	Thr	Glu	Val	Asp	His	Arg	Asp	Lys	Trp	65	70	75
Lys	Ile	Phe	Glu	Leu	Ser	Asn	Val	Glu	Asn	Asp	Gly	Thr	Leu	Leu	Cys	85	90	95
His	Ala	Val	Cys	Gln	Gly	Asn	Gln	Thr	Gln	Val	Gln	Gly	Asn	Leu	Thr	100	105	110
Val	Tyr	Trp	Phe	Pro	Glu	Tyr	Val	Lys	Leu	Ala	Asn	Leu	Ser	Trp	Gln	115	120	125
Arg	Glu	Gly	Gln	His	Phe	Asn	Leu	Ser	Cys	Gln	Val	Ser	Gly	Gly	Ala	130	135	140
Pro	Arg	Thr	Asn	Leu	Ser	Ala	Val	Leu	Phe	Arg	Gly	Glu	Glu	Glu	Leu	145	150	155
Phe	Arg	Gln	Ser	Val	Gly	Met	Glu	Glu	Pro	Ala	Asn	Val	Thr	Phe	Arg	165	170	175
Met	Leu	Ala	Ser	Arg	Lys	Asp	His	Gly	Ala	Asn	Phe	Ser	Cys	Arg	Thr	180	185	190
Glu	Leu	Asn	Leu	Gln	Pro	Gln	Gly	Leu	Glu	Leu	Phe	Trp	Asn	Ser	Ser	195	200	205
Ala	Pro	Leu	Lys	Leu	Gln	Thr	Tyr	Val	Leu	Pro	Ala	Thr	His	Pro	His	210	215	220
Leu	Ala	Thr	Pro	Glu	Leu	Val	Glu	Val	Gly	Thr	Pro	Val	Ser	Val	Asn	225	230	235
Cys	Ser	Leu	Asp	Gly	Leu	Phe	Pro	Ala	Ser	Glu	Ala	Thr	Val	His	Leu	245	250	255
Ala	Arg	Gly	Asp	His	Arg	Pro	Pro	Leu	Thr	Ile	Thr	His	Asn	Gly	Asp	260	265	270
Ser	Leu	Leu	Ala	Lys	Thr	Trp	Ile	Asn	Gly	Thr	Glu	Lys	Glu	Gln	Gly	275	280	285
Thr	Gln	Tyr	Leu	Val	Cys	Glu	Ile	Met	Leu	Ala	Asp	Glu	Lys	Val	Val	290	295	300
Thr	Lys	Lys	Asn	Val	Thr	Phe	Tyr	Ser	Phe	Pro	Pro	Pro	Asn	Leu	Thr	305	310	315
Leu	Ser	Glu	Pro	Glu	Val	Ser	Glu	Gly	Thr	Thr	Val	Ser	Ile	Glu	Cys	325	330	335
Gln	Ala	His	Gly	Glu	Ala	Val	Val	Thr	Leu	Asn	Glu	Val	Pro	Ala	Glu	340	345	350

Pro Pro Ser Gln Arg Ala Gln Leu Lys Leu Asn Val Ser Ala Glu Asp  
 355 360 365  
 His Gly Arg Ser Phe Ser Cys Ser Ala Ala Leu Thr Val Ala Gly His  
 370 375 380  
 Val Leu Tyr Lys Asn Gln Thr Gln Val Leu Ser Val Leu Tyr Gly Pro  
 385 390 395 400  
 Arg Leu Asp Glu Arg Asp Cys Pro Gly Asn Trp Thr Trp Pro Glu Gly  
 405 410 415  
 Ser His Gln Thr Leu Thr Cys Gln Ala Arg Gly Asn Pro Thr Pro Lys  
 420 425 430  
 Leu Ile Cys Arg Arg Glu Gly Asp Gly Ala Leu Leu Pro Thr Gly Asp  
 435 440 445  
 Leu Gly Pro Val Lys Arg Glu Ile Thr Gly Thr Tyr Gln Cys Gln Ala  
 450 455 460  
 Thr Ser Ser Arg Gly Val Ala Thr Arg Val Val Val Val Asn Val Ile  
 465 470 475 480  
 His Asn Gln Asn Asn Met Val Ile Ile Ile Pro Val Ala Ala Val Ala  
 485 490 495  
 Ile Leu Gly Ser Val Gly Val Ala Ala Tyr Ile Tyr Asn Tyr Gln Arg  
 500 505 510  
 Lys Ile Gln Lys Tyr Glu Leu Gln Lys Ala Gln Glu Asn Ala Ala Met  
 515 520 525  
 Lys Leu Ser Thr Pro Ala Ser Pro Pro  
 530 535

&lt;210&gt; 75

&lt;211&gt; 912

&lt;212&gt; PRT

<213> *Oryctolagus cuniculus*

&lt;400&gt; 75

Met Pro Gly Pro Ser Pro Gly Leu Arg Ala Leu Leu Gly Phe Trp Val  
 1 5 10 15  
 Ala Leu Gly Leu Gly Ile Leu Arg Leu Ser Ala Val Ala Gln Glu Pro  
 20 25 30  
 Phe Trp Ala Asp Leu Gln Pro Arg Val Ala Leu Val Glu Arg Gly Gly  
 35 40 45  
 Ser Leu Trp Leu Asn Cys Ser Thr Asn Cys Pro Arg Pro Glu Arg Gly  
 50 55 60  
 Gly Leu Glu Thr Ser Leu Arg Arg Asn Gly Pro Glu Gly Leu Arg Trp  
 65 70 75 80

Arg	Ala	Arg	Gln	Leu	Val	Asp	Ile	Arg	Glu	Pro	Glu	Thr	Gln	Pro	Val	85	90	95
Cys	Phe	Phe	Arg	Cys	Ala	Ala	Thr	Leu	Gln	Ala	Arg	Gly	Leu	Ile	Arg	100	105	110
Thr	Phe	Gln	Arg	Pro	Asp	Arg	Val	Glu	Leu	Val	Pro	Leu	Pro	Pro	Trp	115	120	125
Gln	Pro	Val	Gly	Glu	Asn	Phe	Thr	Leu	Ser	Cys	Arg	Val	Pro	Gly	Ala	130	135	140
Gly	Pro	Arg	Gly	Ser	Leu	Thr	Leu	Thr	Leu	Leu	Arg	Gly	Ala	Gln	Glu	145	150	155
Leu	Ile	Arg	Arg	Ser	Phe	Ala	Gly	Glu	Pro	Ala	Arg	Ala	Arg	Gly	Ala	165	170	175
Val	Leu	Thr	Ala	Thr	Val	Leu	Ala	Arg	Arg	Glu	Asp	His	Gly	Ala	Asn	180	185	190
Phe	Ser	Cys	Arg	Ala	Glu	Leu	Asp	Leu	Arg	Pro	Gln	Gly	Leu	Ala	Leu	195	200	205
Phe	Glu	Asn	Ser	Ser	Ala	Pro	Arg	Gln	Leu	Trp	Thr	Tyr	Ala	Leu	Pro	210	215	220
Leu	Asp	Ser	Pro	Arg	Leu	Leu	Ala	Pro	Arg	Val	Leu	Glu	Val	Asp	Ser	225	230	235
Gln	Ser	Leu	Val	Ser	Cys	Thr	Leu	Asp	Gly	Leu	Phe	Pro	Ala	Ser	Glu	245	250	255
Ala	Gly	Val	His	Leu	Ala	Leu	Gly	Asp	Lys	Arg	Leu	Asn	Pro	Glu	Val	260	265	270
Thr	Leu	Glu	Gly	Asp	Ala	Ile	Val	Ala	Thr	Ala	Thr	Ala	Thr	Ala	Glu	275	280	285
Glu	Glu	Gly	Ile	Lys	Gln	Leu	Val	Cys	Ala	Val	Thr	Leu	Gly	Gly	Glu	290	295	300
Arg	Arg	Glu	Ser	Arg	Glu	Asn	Val	Thr	Val	Tyr	Ser	Phe	Pro	Ala	Pro	305	310	315
Leu	Leu	Thr	Leu	Ser	Glu	Pro	Ser	Ala	Pro	Glu	Gly	Lys	Leu	Val	Thr	325	330	335
Val	Thr	Cys	Thr	Ala	Gly	Ala	Arg	Ala	Leu	Val	Thr	Leu	Glu	Gly	Val	340	345	350
Pro	Ala	Ala	Ala	Pro	Gly	Gln	Pro	Ala	Gln	Leu	Gln	Phe	Asn	Ala	Ser	355	360	365
Glu	Ser	Asp	Asp	Gly	Arg	Ser	Phe	Phe	Cys	Asp	Ala	Thr	Leu	Glu	Leu	370	375	380

Asp	Gly	Glu	Thr	Leu	Ser	Lys	Asn	Gly	Ser	Ala	Glu	Leu	Arg	Val	Leu	385	390	395	400
Tyr	Ala	Pro	Arg	Leu	Asp	Asp	Ala	Asp	Cys	Pro	Arg	Ser	Trp	Thr	Trp	405	410		415
Pro	Glu	Gly	Pro	Glu	Gln	Thr	Leu	Arg	Cys	Glu	Ala	Arg	Gly	Asn	Pro	420	425		430
Thr	Pro	Ala	Val	His	Cys	Ala	Arg	Ser	Asp	Gly	Gly	Ala	Val	Leu	Ala	435	440		445
Leu	Gly	Leu	Leu	Gly	Pro	Val	Thr	Arg	Ala	Leu	Ala	Gly	Thr	Tyr	Arg	450	455		460
Cys	Thr	Ala	Ala	Asn	Val	Gln	Gly	Glu	Ala	Val	Lys	Asp	Val	Thr	Leu	465	470		475
Thr	Val	Glu	Tyr	Ala	Pro	Ala	Leu	Asp	Ser	Val	Gly	Cys	Pro	Glu	Arg	485	490		495
Val	Thr	Trp	Leu	Glu	Gly	Thr	Glu	Ala	Ser	Leu	Ser	Cys	Val	Ala	His	500	505		510
Gly	Val	Pro	Pro	Pro	Ser	Val	Ser	Cys	Val	Arg	Phe	Arg	Gln	Ala	Asp	515	520		525
Val	Ile	Glu	Gly	Leu	Leu	Leu	Val	Ala	Arg	Glu	His	Ala	Gly	Thr	Tyr	530	535		540
Arg	Cys	Glu	Ala	Ile	Asn	Ala	Arg	Ala	Leu	Ala	Lys	Asn	Val	Ala	Val	545	550		555
Thr	Val	Glu	Tyr	Gly	Pro	Ser	Phe	Glu	Glu	Arg	Ser	Cys	Pro	Ser	Asn	565	570		575
Trp	Thr	Trp	Val	Glu	Gly	Ser	Glu	Gln	Leu	Phe	Ser	Cys	Glu	Val	Glu	580	585		590
Gly	Lys	Pro	Gln	Pro	Ser	Val	Gln	Cys	Val	Gly	Ser	Glu	Gly	Ala	Ser	595	600		605
Glu	Gly	Leu	Leu	Leu	Pro	Leu	Ala	Pro	Leu	Asn	Pro	Ser	Pro	Ser	Asp	610	615		620
Pro	Ser	Val	Pro	Arg	Asp	Leu	Ala	Pro	Gly	Ile	Tyr	Val	Cys	Asn	Ala	625	630		635
Thr	Asn	Pro	Leu	Gly	Ser	Ala	Val	Lys	Thr	Val	Val	Val	Ser	Ala	Glu	645	650		655
Ser	Pro	Pro	Gln	Met	Asp	Asp	Ser	Thr	Cys	Pro	Ser	Asp	Gln	Thr	Trp	660	665		670
Leu	Glu	Gly	Ala	Glu	Ala	Ala	Gly	Pro	Ala	Cys	Ala	Arg	Gly	Arg	Pro	675	680		685

Ser Pro Arg Val Arg Cys Ser Arg Glu Gly Ala Pro Arg Pro Ala Arg  
 690 695 700  
 Pro Arg Val Ser Arg Glu Asp Ala Gly Thr Tyr Leu Cys Val Ala Thr  
 705 710 715 720  
 Asn Ala His Gly Ser Asp Ser Arg Thr Val Thr Val Gly Val Glu Tyr  
 725 730 735  
 Arg Pro Val Val Ala Glu Leu Ala Ala Ser Pro Ser Gly Gly Val Arg  
 740 745 750  
 Pro Gly Gly Asn Phe Thr Leu Thr Cys Arg Ala Glu Ala Trp Pro Pro  
 755 760 765  
 Ala Gln Ile Ser Trp Arg Ala Pro Pro Gly Ala Pro Asn Ile Gly Leu  
 770 775 780  
 Ser Ser Asn Asn Ser Thr Leu Ser Val Pro Gly Ala Met Gly Ser His  
 785 790 795 800  
 Gly Gly Glu Tyr Glu Cys Glu Ala Thr Asn Ala His Gly His Ala Arg  
 805 810 815  
 Arg Ile Thr Val Arg Val Ala Gly Pro Trp Leu Trp Ile Ala Val Gly  
 820 825 830  
 Gly Ala Val Gly Gly Ala Val Leu Leu Ala Ala Gly Ala Gly Leu Ala  
 835 840 845  
 Phe Tyr Val Gln Ser Thr Ala Cys Lys Lys Gly Glu Tyr Asn Val Gln  
 850 855 860  
 Glu Ala Glu Ser Ser Gly Glu Ala Val Cys Leu Asn Gly Ala Gly Gly  
 865 870 875 880  
 Gly Ala Gly Ser Gly Ala Glu Gly Gly Pro Glu Ala Glu Asp Ser Ala  
 885 890 895  
 Glu Ser Pro Ala Gly Gly Glu Val Phe Ala Ile Gln Leu Thr Ser Ala  
 900 905 910

&lt;210&gt; 76

&lt;211&gt; 917

&lt;212&gt; PRT

&lt;213&gt; Mus musculus

&lt;400&gt; 76

Met Pro Gly Pro Ser Pro Gly Leu Arg Arg Ala Leu Leu Gly Leu Trp  
 1 5 10 15

Ala Ala Leu Gly Leu Gly Ile Leu Gly Ile Ser Ala Val Ala Leu Glu  
 20 25 30

Pro Phe Trp Ala Asp Leu Gln Pro Arg Val Ala Leu Val Glu Pro Gly  
 35 40 45

Gly Ser Leu Trp Leu Asn Cys Ser Thr Asn Cys Pro Arg Pro Glu Arg  
 50 55 60  
 Gly Gly Leu Glu Thr Ser Leu Arg Arg Asn Gly Thr Gln Arg Gly Leu  
 65 70 75 80  
 Arg Trp Leu Ala Arg Gln Leu Val Asp Ile Arg Glu Pro Glu Thr Gln  
 85 90 95  
 Pro Val Cys Phe Phe Arg Cys Ala Arg Arg Thr Leu Gln Ala Arg Gly  
 100 105 110  
 Leu Ile Arg Thr Phe Gln Arg Pro Asp Arg Val Glu Leu Val Pro Leu  
 115 120 125  
 Pro Ser Trp Gln Pro Val Gly Glu Asn Phe Thr Leu Ser Cys Arg Val  
 130 135 140  
 Pro Gly Ala Gly Pro Arg Ala Ser Leu Thr Leu Thr Leu Leu Arg Gly  
 145 150 155 160  
 Gly Gln Glu Leu Ile Arg Arg Ser Phe Val Gly Glu Pro Pro Arg Ala  
 165 170 175  
 Arg Gly Ala Met Leu Thr Ala Arg Val Leu Ala Arg Arg Glu Asp His  
 180 185 190  
 Arg Val Asn Phe Ser Cys Leu Ala Glu Leu Asp Leu Arg Pro His Gly  
 195 200 205  
 Leu Gly Leu Phe Ala Asn Ser Ser Ala Pro Arg Gln Leu Arg Thr Phe  
 210 215 220  
 Ala Met Pro Pro His Ser Pro Ser Leu Ile Ala Pro Arg Val Leu Glu  
 225 230 235 240  
 Val Asp Ser Glu Arg Pro Val Thr Cys Thr Leu Asp Gly Leu Phe Pro  
 245 250 255  
 Ala Pro Glu Ala Gly Val Tyr Leu Ser Leu Gly Asp Gln Arg Leu Asn  
 260 265 270  
 Pro Asn Val Thr Leu Asp Gly Asp Ser Leu Val Ala Thr Ala Thr Ala  
 275 280 285  
 Thr Ala Ser Ala Glu Gln Glu Gly Thr Lys Gln Leu Met Cys Val Val  
 290 295 300  
 Thr Leu Gly Gly Glu Thr Arg Glu Thr Gln Glu Asn Leu Thr Val Tyr  
 305 310 315 320  
 Ser Phe Pro Thr Pro Leu Leu Thr Leu Ser Glu Pro Glu Ala Pro Glu  
 325 330 335  
 Gly Lys Met Val Thr Ile Ser Cys Trp Ala Gly Ala Arg Ala Leu Val  
 340 345 350

Thr Leu Glu Gly Ile Pro Ala Ala Val Pro Gly Gln Pro Ala Glu Leu  
 355 360 365  
 Gln Leu Asn Val Thr Lys Asn Asp Asp Lys Arg Gly Phe Phe Cys Asp  
 370 375 380  
 Ala Ala Leu Asp Val Asp Gly Glu Thr Leu Arg Lys Asn Gln Ser Ser  
 385 390 395 400  
 Glu Leu Arg Val Leu Tyr Ala Pro Arg Leu Asp Asp Leu Asp Cys Pro  
 405 410 415  
 Arg Ser Trp Thr Trp Pro Glu Gly Pro Glu Gln Thr Leu His Cys Glu  
 420 425 430  
 Ala Arg Gly Asn Pro Glu Pro Ser Val His Cys Ala Arg Pro Glu Gly  
 435 440 445  
 Gly Ala Val Leu Ala Leu Gly Leu Leu Gly Pro Val Thr Arg Ala Leu  
 450 455 460  
 Ala Gly Thr Tyr Arg Cys Thr Ala Val Asn Gly Gln Gly Gln Ala Val  
 465 470 475 480  
 Lys Asp Val Thr Leu Thr Val Glu Tyr Ala Pro Ala Leu Asp Ser Val  
 485 490 495  
 Gly Cys Pro Glu His Ile Thr Trp Leu Glu Gly Thr Glu Ala Ser Leu  
 500 505 510  
 Ser Cys Val Ala Pro Gly Val Pro Pro Pro Ser Val Ser Cys Val Arg  
 515 520 525  
 Ser Gly Lys Glu Glu Val Met Glu Gly Pro Leu Arg Val Ala Arg Glu  
 530 535 540  
 His Ala Gly Thr Tyr Arg Cys Glu Ala Ile Asn Ala Arg Gly Ser Ala  
 545 550 555 560  
 Ala Lys Asn Val Ala Val Thr Val Glu Tyr Gly Pro Ser Phe Glu Glu  
 565 570 575  
 Leu Gly Cys Pro Ser Asn Trp Thr Trp Val Glu Gly Ser Gly Lys Leu  
 580 585 590  
 Phe Ser Cys Glu Val Asp Gly Lys Pro Glu Pro Arg Val Glu Cys Val  
 595 600 605  
 Gly Ser Glu Gly Ala Ser Glu Gly Ile Val Leu Pro Leu Val Ser Ser  
 610 615 620  
 Asn Ser Gly Pro Arg Asn Ser Met Thr Pro Gly Asn Leu Ser Pro Gly  
 625 630 635 640  
 Ile Tyr Leu Cys Asn Ala Thr Asn Arg His Gly Ser Thr Val Lys Thr  
 645 650 655

Val Val Val Ser Ala Glu Ser Pro Pro Gln Met Asp Glu Ser Ser Cys  
 660 665 670  
 Pro Ser His Gln Thr Trp Leu Glu Gly Ala Glu Ala Thr Ala Leu Ala  
 675 680 685  
 Cys Ser Ala Arg Gly Arg Pro Ser Pro Arg Val His Cys Ser Arg Glu  
 690 695 700  
 Gly Ala Ala Arg Leu Glu Arg Leu Gln Val Ser Arg Glu Asp Ala Gly  
 705 710 715 720  
 Thr Tyr Arg Cys Val Ala Thr Asn Ala His Gly Thr Asp Ser Arg Thr  
 725 730 735  
 Val Thr Val Gly Val Glu Tyr Arg Pro Val Val Ala Glu Leu Ala Ala  
 740 745 750  
 Ser Pro Pro Ser Val Arg Pro Gly Gly Asn Phe Thr Leu Thr Cys Arg  
 755 760 765  
 Ala Glu Ala Trp Pro Pro Ala Gln Ile Ser Trp Arg Ala Pro Pro Gly  
 770 775 780  
 Ala Leu Asn Leu Gly Leu Ser Ser Asn Asn Ser Thr Leu Ser Val Ala  
 785 790 795 800  
 Gly Ala Met Gly Ser His Gly Gly Glu Tyr Glu Cys Ala Ala Thr Asn  
 805 810 815  
 Ala His Gly Arg His Ala Arg Arg Ile Thr Val Arg Val Ala Gly Pro  
 820 825 830  
 Trp Leu Trp Val Ala Val Gly Gly Ala Ala Gly Gly Ala Ala Leu Leu  
 835 840 845  
 Ala Ala Gly Ala Gly Leu Ala Phe Tyr Val Gln Ser Thr Ala Cys Lys  
 850 855 860  
 Lys Gly Glu Tyr Asn Val Gln Glu Ala Glu Ser Ser Gly Glu Ala Val  
 865 870 875 880  
 Cys Leu Asn Gly Ala Gly Gly Thr Pro Gly Ala Glu Gly Gly Ala Glu  
 885 890 895  
 Thr Pro Gly Thr Ala Glu Ser Pro Ala Asp Gly Glu Val Phe Ala Ile  
 900 905 910  
 Gln Leu Thr Ser Ser  
 915

&lt;210&gt; 77

&lt;211&gt; 548

&lt;212&gt; PRT

&lt;213&gt; Mus musculus

&lt;400&gt; 77

Met	Lys	Met	Leu	Leu	Leu	Gly	Val	Trp	Thr	Leu	Leu	Ala	Leu	Ile	Pro
1				5					10					15	
Cys	Pro	Gly	Ala	Ala	Glu	Glu	Leu	Phe	Gln	Val	Ser	Val	His	Pro	Asn
			20					25					30		
Glu	Ala	Leu	Val	Glu	Phe	Gly	His	Ser	Leu	Thr	Val	Asn	Cys	Ser	Thr
		35					40					45			
Thr	Cys	Pro	Asp	Pro	Gly	Pro	Ser	Gly	Ile	Glu	Thr	Phe	Leu	Lys	Lys
	50					55					60				
Thr	Gln	Leu	Ser	Lys	Gly	Ser	Gln	Trp	Lys	Glu	Phe	Leu	Leu	Glu	Asp
65					70					75					80
Ile	Thr	Glu	Asp	Leu	Val	Leu	Gln	Cys	Phe	Phe	Ser	Cys	Ala	Gly	Glu
				85					90					95	
Gln	Lys	Asp	Thr	Val	Leu	Ala	Ile	Thr	Met	Tyr	Gln	Pro	Pro	Glu	Gln
			100					105					110		
Val	Ile	Leu	Asp	Leu	Gln	Pro	Glu	Trp	Val	Ala	Val	Asp	Glu	Ala	Phe
		115					120					125			
Thr	Val	Thr	Cys	His	Val	Pro	Ser	Val	Ala	Pro	Leu	Gln	Ser	Leu	Thr
	130					135					140				
Leu	Thr	Leu	Leu	Gln	Gly	Asp	Gln	Glu	Leu	His	Arg	Lys	Asp	Phe	Leu
145					150					155					160
Ser	Leu	Ser	Leu	Val	Ser	Gln	Arg	Ala	Glu	Val	Thr	Ala	Thr	Val	Arg
				165					170					175	
Ala	His	Arg	Asp	Asn	Asp	Arg	Arg	Asn	Phe	Ser	Cys	Arg	Ala	Glu	Leu
			180					185					190		
Asp	Leu	Ser	Pro	His	Gly	Gly	Gly	Leu	Phe	His	Gly	Ser	Ser	Ala	Thr
		195					200					205			
Lys	Gln	Leu	Arg	Ile	Phe	Glu	Phe	Ser	Gln	Asn	Pro	Gln	Ile	Trp	Val
	210					215					220				
Pro	Ser	Leu	Leu	Glu	Val	Gly	Lys	Ala	Glu	Ile	Val	Ser	Cys	Glu	Val
225					230					235					240
Thr	Arg	Val	Phe	Pro	Ala	Gln	Glu	Ala	Val	Phe	Arg	Met	Phe	Leu	Glu
				245					250					255	
Asp	Gln	Glu	Leu	Ser	Pro	Phe	Ser	Ser	Trp	Arg	Glu	Asp	Ala	Ala	Trp
			260					265					270		
Ala	Ser	Ala	Thr	Ile	Gln	Ala	Met	Glu	Thr	Gly	Asp	Gln	Glu	Leu	Thr
		275					280					285			
Cys	Leu	Val	Ser	Leu	Gly	Pro	Val	Glu	Gln	Lys	Thr	Arg	Lys	Pro	Val
	290					295					300				

Tyr Val Tyr Ser Phe Pro Pro Pro Ile Leu Glu Ile Glu Asp Ala Tyr  
 305 310 315 320  
 Pro Leu Ala Gly Thr Asp Val Asn Val Thr Cys Ser Gly His Val Leu  
 325 330 335  
 Thr Ser Pro Ser Pro Thr Leu Arg Leu Gln Gly Ser Leu Asn His Ser  
 340 345 350  
 Ala Pro Gly Lys Pro Ala Trp Leu Leu Phe Thr Ala Arg Glu Glu Asp  
 355 360 365  
 Asp Gly Arg Thr Leu Ser Cys Glu Ala Ser Leu Glu Val Gln Gly Gln  
 370 375 380  
 Arg Leu Val Arg Thr Thr Glu Ser Gln Leu His Val Leu Tyr Lys Pro  
 385 390 395 400  
 Arg Phe Gln Glu Ser Arg Cys Pro Gly Asn Gln Ile Trp Val Glu Gly  
 405 410 415  
 Met His Gln Met Leu Ala Cys Ile Pro Glu Gly Asn Pro Thr Pro Val  
 420 425 430  
 Leu Val Cys Val Trp Asn Gly Met Ile Phe Asp Leu Asp Val Pro Gln  
 435 440 445  
 Lys Ala Thr Gln Asn His Thr Gly Thr Tyr Cys Cys Thr Ala Thr Asn  
 450 455 460  
 Pro Leu Gly Ser Val Ser Lys Asp Ile Thr Ile Ile Val Gln Gly Leu  
 465 470 475 480  
 Pro Glu Gly Ile Ser Ser Ser Thr Ile Phe Ile Ile Ile Ile Phe Thr  
 485 490 495  
 Leu Gly Met Ala Val Ile Thr Val Ala Leu Tyr Leu Asn Tyr Gln Pro  
 500 505 510  
 Cys Lys Gly Asn Ser Arg Lys Arg Met His Arg Pro Arg Glu Gln Ser  
 515 520 525  
 Lys Gly Glu Glu Ser Gln Phe Ser Asp Ile Arg Ala Glu Glu Cys His  
 530 535 540  
 Ala His Leu Cys  
 545

&lt;210&gt; 78

&lt;211&gt; 548

&lt;212&gt; PRT

&lt;213&gt; Rattus norvegicus

&lt;400&gt; 78

Met Lys Met Leu Leu Leu Gly Ile Trp Thr Leu Leu Ala Leu Ile Pro  
 1 5 10 15

Cys	Pro	Gly	Thr	Thr	Glu	Val	Leu	Phe	Gln	Val	Ser	Val	His	Pro	Asn			
			20					25					30					
Gln	Ala	Leu	Val	Glu	Phe	Gly	His	Ser	Leu	Thr	Ile	Asn	Cys	Ser	Thr			
		35					40					45						
Thr	Cys	Pro	Asp	Pro	Gly	Pro	Ser	Gly	Ile	Glu	Thr	Phe	Leu	Lys	Lys			
	50					55					60							
Thr	Gln	Leu	Ser	Lys	Gly	Ser	Gln	Trp	Lys	Glu	Phe	Leu	Leu	Glu	Gly			
65					70					75					80			
Ile	Thr	Glu	Asn	Ser	Val	Leu	Gln	Cys	Phe	Phe	Ser	Cys	Ala	Gly	Val			
			85						90					95				
Gln	Lys	Asp	Thr	Ala	Leu	Asp	Ile	Thr	Met	Tyr	Gln	Pro	Pro	Glu	Gln			
			100					105					110					
Val	Ile	Leu	Asp	Leu	Gln	Pro	Glu	Trp	Val	Ala	Ile	Asp	Glu	Ala	Phe			
	115						120					125						
Thr	Val	Lys	Cys	His	Val	Pro	Ser	Val	Ala	Pro	Leu	Gln	Ser	Leu	Thr			
	130					135					140							
Leu	Thr	Leu	Leu	Gln	Gly	Asp	Gln	Glu	Leu	His	Arg	Lys	Asp	Phe	Leu			
145				150						155					160			
Ser	Leu	Ser	Leu	Val	Ser	Gln	Arg	Ala	Glu	Val	Thr	Val	Asn	Val	Arg			
			165						170				175					
Ala	Gln	Arg	Glu	Asn	Asp	Arg	His	Asn	Phe	Ser	Cys	Arg	Ala	Glu	Leu			
		180						185					190					
Asp	Leu	Ser	Pro	His	Gly	Gly	Gly	Leu	Phe	His	Gly	Ser	Ser	Ala	Thr			
	195					200						205						
Lys	Gln	Leu	Arg	Ile	Phe	Glu	Phe	Ser	Gln	Asn	Pro	Gln	Ile	Leu	Val			
	210					215					220							
Pro	Ser	Leu	Leu	Glu	Val	Gly	Met	Ala	Glu	Thr	Met	Ser	Cys	Glu	Val			
225					230					235					240			
Val	Arg	Val	Phe	Pro	Ala	Gln	Glu	Ala	Val	Phe	Arg	Met	Phe	Leu	Glu			
			245						250					255				
Asp	Gln	Glu	Leu	Ser	Pro	Phe	Ser	Ser	Trp	Lys	Gly	Asp	Ala	Ala	Trp			
		260					265						270					
Ala	Ser	Ala	Thr	Ile	Gln	Ala	Met	Glu	Thr	Gly	Asp	Gln	Glu	Leu	Thr			
		275					280					285						
Cys	Leu	Val	Ser	Val	Gly	Pro	Val	Glu	Gln	Lys	Ala	Arg	Lys	Pro	Val			
	290					295					300							
His	Val	Tyr	Ser	Phe	Pro	Pro	Pro	Val	Leu	Glu	Ile	Glu	Asp	Ala	Tyr			
305					310					315					320			

Pro Gln Ala Gly Thr Asp Val Asn Val Thr Cys Ser Gly His Val Leu  
 325 330 335  
 Thr Ser Pro Ser Pro Thr Leu Arg Leu Gln Gly Ser Leu Asn Leu Ser  
 340 345 350  
 Ala Pro Gly Glu Pro Ala Trp Leu Arg Phe Thr Ala Arg Glu Glu Asp  
 355 360 365  
 Asp Gly Arg Thr Leu Ser Cys Glu Ala Ser Leu Val Val Gln Gly Gln  
 370 375 380  
 Arg Leu Val Lys Thr Thr Lys Ile Gln Leu His Val Leu Tyr Lys Pro  
 385 390 395 400  
 Arg Phe Gln Glu Ser Asp Cys Pro Gly Asn Gln Ile Trp Val Glu Gly  
 405 410 415  
 Met Asp Gln Met Leu Ala Cys Ile Pro Glu Gly Asn Pro Ile Pro Ala  
 420 425 430  
 Leu Val Cys Ile Trp Asn Gly Met Thr Phe Asp Leu Glu Val Pro Gln  
 435 440 445  
 Lys Ala Thr Gln Asn His Thr Gly Thr Tyr Ser Cys Thr Ala Thr Asn  
 450 455 460  
 Ser Leu Gly Ser Val Ser Lys Asp Ile Ala Val Leu Val Gln Gly Leu  
 465 470 475 480  
 His Glu Gly Ile Ser Ser Ser Thr Ile Phe Ile Ile Ile Ile Phe Thr  
 485 490 495  
 Leu Gly Met Ala Val Ile Thr Ile Ala Leu Tyr Leu Asn Tyr Gln Pro  
 500 505 510  
 Cys Lys Arg Asn Gly Arg Lys Arg Thr His Arg Gln Lys Glu Gln Asn  
 515 520 525  
 Lys Gly Gly Glu Arg Gln Phe Ser Asp Ile Gln Ala Glu Glu Cys His  
 530 535 540  
 Ala His Leu Cys  
 545

&lt;210&gt; 79

&lt;211&gt; 396

&lt;212&gt; PRT

&lt;213&gt; Mus musculus

&lt;400&gt; 79

Met Gly Ala Pro Ser Ala Leu Pro Leu Leu Leu Leu Leu Ala Cys Ser  
 1 5 10 15

Trp Ala Pro Gly Gly Ala Asn Leu Ser Gln Asp Asp Ser Gln Pro Trp  
 20 25 30

Thr	Ser	Asp	Glu	Thr	Val	Val	Ala	Gly	Gly	Thr	Val	Val	Leu	Lys	Cys	35	40	45
Gln	Val	Lys	Asp	His	Glu	Asp	Ser	Ser	Leu	Gln	Trp	Ser	Asn	Pro	Ala	50	55	60
Gln	Gln	Thr	Leu	Tyr	Phe	Gly	Glu	Lys	Arg	Ala	Leu	Arg	Asp	Asn	Arg	65	70	75
Ile	Gln	Leu	Val	Ser	Ser	Thr	Pro	His	Glu	Leu	Ser	Ile	Ser	Ile	Ser	85	90	95
Asn	Val	Ala	Leu	Ala	Asp	Glu	Gly	Glu	Tyr	Thr	Cys	Ser	Ile	Phe	Thr	100	105	110
Met	Pro	Val	Arg	Thr	Ala	Lys	Ser	Leu	Val	Thr	Val	Leu	Gly	Ile	Pro	115	120	125
Gln	Lys	Pro	Ile	Ile	Thr	Gly	Tyr	Lys	Ser	Ser	Leu	Arg	Glu	Lys	Glu	130	135	140
Thr	Ala	Thr	Leu	Asn	Cys	Gln	Ser	Ser	Gly	Ser	Lys	Pro	Ala	Ala	Gln	145	150	155
Leu	Thr	Trp	Arg	Lys	Gly	Asp	Gln	Glu	Leu	His	Gly	Asp	Gln	Thr	Arg	165	170	175
Ile	Gln	Glu	Asp	Pro	Asn	Gly	Lys	Thr	Phe	Thr	Val	Ser	Ser	Ser	Val	180	185	190
Ser	Phe	Gln	Val	Thr	Arg	Glu	Asp	Asp	Gly	Ala	Asn	Ile	Val	Cys	Ser	195	200	205
Val	Asn	His	Glu	Ser	Leu	Lys	Gly	Ala	Asp	Arg	Ser	Thr	Ser	Gln	Arg	210	215	220
Ile	Glu	Val	Leu	Tyr	Thr	Pro	Thr	Ala	Met	Ile	Arg	Pro	Glu	Pro	Ala	225	230	235
His	Pro	Arg	Glu	Gly	Gln	Lys	Leu	Leu	Leu	His	Cys	Glu	Gly	Arg	Gly	245	250	255
Asn	Pro	Val	Pro	Gln	Gln	Tyr	Val	Trp	Val	Lys	Glu	Gly	Ser	Glu	Pro	260	265	270
Pro	Leu	Lys	Met	Thr	Gln	Glu	Ser	Ala	Leu	Ile	Phe	Pro	Phe	Leu	Asn	275	280	285
Lys	Ser	Asp	Ser	Gly	Thr	Tyr	Gly	Cys	Thr	Ala	Thr	Ser	Asn	Met	Gly	290	295	300
Ser	Tyr	Thr	Ala	Tyr	Phe	Thr	Leu	Asn	Val	Asn	Asp	Pro	Ser	Pro	Val	305	310	315
Pro	Ser	Ser	Ser	Ser	Thr	Tyr	His	Ala	Ile	Ile	Gly	Gly	Ile	Val	Ala	325	330	335

Phe Ile Val Phe Leu Leu Leu Ile Leu Leu Ile Phe Leu Gly His Tyr  
 340 345 350

Leu Ile Arg His Lys Gly Thr Tyr Leu Thr His Glu Ala Lys Gly Ser  
 355 360 365

Asp Asp Ala Pro Asp Ala Asp Thr Ala Ile Ile Asn Ala Glu Gly Gly  
 370 375 380

Gln Ser Gly Gly Asp Asp Lys Lys Glu Tyr Phe Ile  
 385 390 395

<210> 80

<211> 662

<212> PRT

<213> Homo sapiens

<400> 80

Met Glu Ser Lys Thr Glu Lys Trp Met Glu Arg Ile His Leu Asn Val  
 1 5 10 15

Ser Glu Arg Pro Phe Pro Pro His Ile Gln Leu Pro Pro Glu Ile Gln  
 20 25 30

Glu Ser Gln Glu Val Thr Leu Thr Cys Leu Leu Asn Phe Ser Cys Tyr  
 35 40 45

Gly Tyr Pro Ile Gln Leu Gln Trp Leu Leu Glu Gly Val Pro Met Arg  
 50 55 60

Gln Ala Ala Val Thr Ser Thr Ser Leu Thr Ile Lys Ser Val Phe Thr  
 65 70 75 80

Arg Ser Glu Leu Lys Phe Ser Pro Gln Trp Ser His His Gly Lys Ile  
 85 90 95

Val Thr Cys Gln Leu Gln Asp Ala Asp Gly Lys Phe Leu Ser Asn Asp  
 100 105 110

Thr Val Gln Leu Asn Val Lys His Thr Pro Lys Leu Glu Ile Lys Val  
 115 120 125

Thr Pro Ser Asp Ala Ile Val Arg Glu Gly Asp Ser Val Thr Met Thr  
 130 135 140

Cys Glu Val Ser Ser Thr Asn Pro Glu Tyr Thr Thr Val Ser Trp Leu  
 145 150 155 160

Lys Asp Gly Thr Ser Leu Lys Lys Gln Asn Thr Phe Thr Leu Asn Leu  
 165 170 175

Arg Glu Val Thr Lys Asp Gln Ser Gly Lys Tyr Cys Cys Gln Val Ser  
 180 185 190

Asn Asp Val Gly Pro Gly Arg Ser Glu Glu Val Phe Leu Gln Val Gln  
 195 200 205

Tyr	Ala	Pro	Glu	Pro	Ser	Thr	Val	Gln	Ile	Leu	His	Ser	Pro	Ala	Val	210	215	220	
Glu	Gly	Ser	Gln	Val	Glu	Phe	Leu	Cys	Met	Ser	Leu	Ala	Asn	Pro	Leu	225	230	235	240
Pro	Thr	Asn	Tyr	Thr	Trp	Tyr	His	Asn	Gly	Lys	Glu	Met	Gln	Gly	Arg	245	250	255	
Thr	Glu	Glu	Lys	Val	His	Ile	Pro	Lys	Ile	Leu	Pro	Trp	His	Ala	Gly	260	265	270	
Thr	Tyr	Ser	Cys	Val	Ala	Glu	Asn	Ile	Leu	Gly	Thr	Gly	Gln	Arg	Gly	275	280	285	
Pro	Gly	Ala	Glu	Leu	Asp	Val	Gln	Tyr	Pro	Pro	Lys	Lys	Val	Thr	Thr	290	295	300	
Val	Ile	Gln	Asn	Pro	Met	Pro	Ile	Arg	Glu	Gly	Asp	Thr	Val	Thr	Leu	305	310	315	320
Ser	Cys	Asn	Tyr	Asn	Ser	Ser	Asn	Pro	Ser	Val	Thr	Arg	Tyr	Glu	Trp	325	330	335	
Lys	Pro	His	Gly	Ala	Trp	Glu	Glu	Pro	Ser	Leu	Gly	Val	Leu	Lys	Ile	340	345	350	
Gln	Lys	Val	Gly	Trp	Asp	Asn	Thr	Thr	Ile	Ala	Cys	Ala	Arg	Cys	Asn	355	360	365	
Ser	Trp	Cys	Ser	Trp	Ala	Ser	Pro	Val	Ala	Leu	Asn	Val	Gln	Tyr	Ala	370	375	380	
Pro	Arg	Asp	Val	Arg	Val	Arg	Lys	Ile	Lys	Pro	Leu	Ser	Glu	Ile	His	385	390	395	400
Ser	Gly	Asn	Ser	Val	Ser	Leu	Gln	Cys	Asp	Phe	Ser	Ser	Ser	His	Pro	405	410	415	
Lys	Glu	Val	Gln	Phe	Phe	Trp	Glu	Lys	Asn	Gly	Arg	Leu	Leu	Gly	Lys	420	425	430	
Glu	Ser	Gln	Leu	Asn	Phe	Asp	Ser	Ile	Ser	Pro	Glu	Asp	Ala	Gly	Ser	435	440	445	
Tyr	Ser	Cys	Trp	Val	Asn	Asn	Ser	Ile	Gly	Gln	Thr	Ala	Ser	Lys	Ala	450	455	460	
Trp	Thr	Leu	Glu	Val	Leu	Tyr	Ala	Pro	Arg	Arg	Leu	Arg	Val	Ser	Met	465	470	475	480
Ser	Pro	Gly	Asp	Gln	Val	Met	Glu	Gly	Lys	Ser	Ala	Thr	Leu	Arg	Cys	485	490	495	
Glu	Ser	Asp	Ala	Asn	Pro	Pro	Val	Ser	His	Tyr	Thr	Trp	Phe	Asp	Trp	500	505	510	

Asn Asn Gln Ser Leu Pro Tyr His Ser Gln Lys Leu Arg Leu Glu Pro  
           515                                  520                                  525  
 Val Lys Val Gln His Ser Gly Ala Tyr Trp Cys Gln Gly Thr Asn Ser  
           530                                  535                                  540  
 Val Gly Lys Gly Arg Ser Pro Leu Ser Thr Leu Thr Val Tyr Tyr Ser  
   545                                  550                                  555                                  560  
 Pro Glu Thr Ile Gly Arg Arg Val Ala Val Gly Leu Gly Ser Cys Leu  
                                   565                                  570                                  575  
 Ala Ile Leu Ile Leu Ala Ile Cys Gly Leu Lys Leu Gln Arg Arg Asp  
                                   580                                  585                                  590  
 Ala Glu Ser Ser Glu Met Gln Arg Pro Pro Arg Thr Cys Asp Asp Thr  
                                   595                                  600                                  605  
 Val Thr Tyr Ser Ala Leu His Lys Arg Gln Val Gly Asp Tyr Glu Asn  
   610                                  615                                  620  
 Val Ile Pro Asp Phe Pro Glu Asp Glu Gly Ile His Tyr Ser Glu Leu  
   625                                  630                                  635                                  640  
 Ile Gln Phe Gly Val Gly Glu Arg Pro Gln Ala Gln Glu Asn Val Asp  
                                   645                                  650                                  655  
 Tyr Val Ile Leu Lys His  
                                   660

<210> 81  
 <211> 505  
 <212> PRT  
 <213> Pan troglodytes

<400> 81  
 Gln Thr Ser Val Ser Pro Pro Lys Val Ile Leu Pro Arg Gly Gly Ser  
   1                                  5                                  10                                  15  
 Val Gln Val Thr Cys Ser Thr Ser Cys Asp Gln Pro Asp Leu Leu Gly  
                                   20                                  25                                  30  
 Ile Glu Thr Pro Leu Pro Lys Lys Glu Leu Leu Leu Gly Gly Asn Asn  
                                   35                                  40                                  45  
 Trp Lys Val Tyr Glu Leu Ser Asn Val Gln Glu Asp Ser Gln Pro Met  
   50                                  55                                  60  
 Cys Tyr Ser Asn Cys Pro Asp Gly Gln Ser Thr Ala Lys Thr Phe Leu  
   65                                  70                                  75                                  80  
 Thr Val Tyr Trp Thr Pro Glu Arg Val Glu Leu Ala Pro Leu Pro Ser  
                                   85                                  90                                  95  
 Trp Gln Pro Val Gly Lys Asp Leu Thr Leu Arg Cys Gln Val Glu Gly  
                                   100                                  105                                  110

Gly	Ala	Pro	Arg	Ala	Asn	Leu	Thr	Val	Val	Leu	Leu	Arg	Gly	Glu	Lys	115	120	125
Glu	Leu	Lys	Arg	Glu	Pro	Ala	Val	Gly	Glu	Pro	Ala	Glu	Val	Thr	Thr	130	135	140
Thr	Val	Leu	Val	Glu	Arg	Asp	His	His	Gly	Ala	Asn	Phe	Ser	Cys	Arg	145	150	155
Thr	Glu	Leu	Asp	Leu	Arg	Pro	Gln	Gly	Leu	Gln	Leu	Phe	Glu	Asn	Thr	165	170	175
Ser	Ala	Pro	His	Gln	Leu	Gln	Thr	Phe	Val	Leu	Pro	Ala	Thr	Pro	Pro	180	185	190
Gln	Leu	Val	Ser	Pro	Arg	Val	Leu	Glu	Val	Asp	Thr	Gln	Gly	Thr	Val	195	200	205
Val	Cys	Ser	Leu	Asp	Gly	Leu	Phe	Pro	Val	Leu	Glu	Ala	Gln	Val	His	210	215	220
Leu	Ala	Leu	Gly	Asp	Gln	Arg	Leu	Asn	Pro	Thr	Val	Thr	Tyr	Gly	Asn	225	230	235
Asp	Ser	Phe	Ser	Ala	Lys	Ala	Ser	Val	Ser	Val	Thr	Ala	Glu	Asp	Glu	245	250	255
Gly	Thr	Gln	Arg	Leu	Thr	Cys	Ala	Val	Ile	Leu	Gly	Asn	Gln	Ser	Arg	260	265	270
Glu	Thr	Leu	Gln	Thr	Val	Thr	Ile	Tyr	Ser	Phe	Pro	Ala	Pro	Asn	Val	275	280	285
Ile	Leu	Thr	Lys	Pro	Glu	Val	Ser	Glu	Gly	Thr	Glu	Val	Thr	Val	Lys	290	295	300
Cys	Glu	Ala	His	Pro	Arg	Ala	Lys	Val	Thr	Leu	Asn	Gly	Val	Pro	Ala	305	310	315
Gln	Pro	Val	Gly	Pro	Arg	Val	Gln	Leu	Leu	Leu	Lys	Ala	Thr	Pro	Glu	325	330	335
Asp	Asn	Gly	Arg	Ser	Phe	Ser	Cys	Ser	Ala	Thr	Leu	Glu	Val	Ala	Gly	340	345	350
Gln	Leu	Ile	His	Lys	Asn	Gln	Thr	Arg	Glu	Leu	Arg	Val	Leu	Tyr	Gly	355	360	365
Pro	Arg	Leu	Asp	Glu	Arg	Asp	Cys	Pro	Gly	Asn	Trp	Thr	Trp	Pro	Glu	370	375	380
Asn	Ser	Gln	Gln	Thr	Pro	Met	Cys	Gln	Ala	Ser	Gly	Asn	Pro	Leu	Pro	385	390	395
Glu	Leu	Lys	Cys	Leu	Lys	Asp	Gly	Thr	Phe	Pro	Leu	Pro	Val	Gly	Glu	405	410	415

Ser Val Thr Val Thr Arg Asp Leu Glu Gly Thr Tyr Leu Cys Arg Ala  
                   420                  425                  430  
 Arg Ser Thr Gln Gly Glu Val Thr Arg Lys Val Thr Val Asn Val Leu  
                   435                  440                  445  
 Ser Pro Arg Tyr Glu Ile Val Ile Ile Thr Val Val Ala Ala Ala Val  
                   450                  455                  460  
 Ile Met Gly Thr Ala Gly Leu Ser Thr Tyr Leu Tyr Asn Arg Gln Arg  
                   465                  470                  475                  480  
 Lys Ile Arg Lys Tyr Arg Leu Gln Gln Ala Gln Lys Gly Thr Pro Met  
                   485                  490                  495  
 Lys Pro Asn Thr Gln Ala Thr Pro Pro  
                   500                  505

<210> 82  
 <211> 447  
 <212> PRT  
 <213> Mus musculus  
  
 <220>  
 <221> MOD\_RES  
 <222> (12)  
 <223> Any amino acid  
  
 <220>  
 <221> MOD\_RES  
 <222> (77)..(80)  
 <223> Any amino acid  
  
 <220>  
 <221> MOD\_RES  
 <222> (145)..(147)  
 <223> Any amino acid  
  
 <220>  
 <221> MOD\_RES  
 <222> (155)..(163)  
 <223> Any amino acid  
  
 <220>  
 <221> MOD\_RES  
 <222> (268)..(269)  
 <223> Any amino acid  
  
 <220>  
 <221> MOD\_RES  
 <222> (279)  
 <223> Any amino acid  
  
 <220>  
 <221> MOD\_RES  
 <222> (282)  
 <223> Any amino acid

&lt;400&gt; 82

Glu Asp Ser Gln Pro Met Cys Tyr Ser Asn Cys Xaa Asp Gly Gln Ser  
 1 5 10 15  
 Thr Ala Lys Thr Phe Leu Thr Val Tyr Trp Thr Pro Glu Arg Val Glu  
 20 25 30  
 Leu Ala Pro Leu Pro Ser Trp Gln Pro Val Gly Lys Asn Leu Thr Leu  
 35 40 45  
 Arg Cys Gln Val Glu Gly Gly Ala Pro Arg Ala Asn Leu Thr Val Val  
 50 55 60  
 Leu Leu Arg Gly Glu Lys Glu Leu Lys Arg Glu Pro Xaa Xaa Xaa Xaa  
 65 70 75 80  
 Pro Ala Glu Val Thr Thr Thr Val Leu Val Arg Arg Asp His His Gly  
 85 90 95  
 Ala Asn Phe Ser Cys Arg Thr Glu Leu Asp Leu Arg Pro Gln Gly Leu  
 100 105 110  
 Glu Leu Phe Glu Asn Thr Ser Ala Pro Tyr Gln Leu Gln Thr Phe Val  
 115 120 125  
 Leu Pro Ala Thr Pro Pro Gln Leu Val Ser Pro Arg Val Leu Glu Val  
 130 135 140  
 Xaa Xaa Xaa Gly Thr Val Val Cys Ser Leu Xaa Xaa Xaa Xaa Xaa Xaa  
 145 150 155 160  
 Xaa Xaa Xaa Gln Val His Leu Ala Leu Gly Asp Gln Arg Leu Asn Pro  
 165 170 175  
 Thr Val Thr Tyr Gly Asn Asp Ser Phe Ser Ala Lys Ala Ser Val Ser  
 180 185 190  
 Val Thr Ala Glu Asp Glu Gly Thr Gln Arg Leu Thr Cys Ala Val Ile  
 195 200 205  
 Leu Gly Asn Gln Ser Gln Glu Thr Leu Gln Thr Val Thr Ile Tyr Ser  
 210 215 220  
 Phe Pro Ala Pro Asn Val Ile Leu Thr Lys Pro Glu Val Ser Glu Gly  
 225 230 235 240  
 Thr Glu Val Thr Val Lys Cys Glu Ala His Pro Arg Ala Lys Val Thr  
 245 250 255  
 Leu Asn Gly Val Pro Ala Gln Pro Leu Gly Pro Xaa Xaa Gln Leu Leu  
 260 265 270  
 Leu Lys Ala Thr Pro Glu Xaa Asn Gly Xaa Ser Phe Ser Cys Ser Ala  
 275 280 285  
 Thr Leu Glu Val Ala Gly Gln Leu Ile His Lys Asn Gln Thr Arg Glu  
 290 295 300

Leu Arg Val Leu Tyr Gly Pro Arg Leu Asp Glu Arg Asp Cys Pro Gly  
 305 310 315 320  
 Asn Trp Thr Trp Pro Glu Asn Ser Gln Gln Thr Pro Met Cys Gln Ala  
 325 330 335  
 Trp Gly Asn Pro Leu Pro Glu Leu Lys Cys Leu Lys Asp Gly Thr Phe  
 340 345 350  
 Pro Leu Pro Ile Gly Glu Ser Val Thr Val Thr Arg Asp Leu Glu Gly  
 355 360 365  
 Thr Tyr Leu Cys Arg Ala Arg Ser Thr Gln Gly Glu Val Thr Arg Glu  
 370 375 380  
 Val Thr Val Asn Val Leu Ser Pro Arg Tyr Glu Ile Val Ile Ile Thr  
 385 390 395 400  
 Val Val Ala Ala Ala Val Ile Met Gly Thr Ala Gly Leu Ser Thr Tyr  
 405 410 415  
 Leu Tyr Asn Arg Gln Arg Lys Ile Lys Lys Tyr Arg Leu Gln Gln Ala  
 420 425 430  
 Gln Lys Gly Thr Pro Met Lys Pro Asn Thr Gln Ala Thr Pro Pro  
 435 440 445

&lt;210&gt; 83

&lt;211&gt; 528

&lt;212&gt; PRT

&lt;213&gt; Canis familiaris

&lt;400&gt; 83

Ala Pro Ala Leu Pro Arg Leu Pro Ala Leu Leu Ala Leu Leu Gly Ala  
 1 5 10 15  
 Leu Leu Pro Gly Leu Gly Gly Ala Gln Thr Ser Val Asp Pro Ala Glu  
 20 25 30  
 Ala Ile Ile Leu Arg Gly Gly Ser Val Gln Val Asn Cys Ser Thr Ser  
 35 40 45  
 Cys Asn Gln Thr Ser Ile Phe Gly Leu Glu Thr Leu Leu Thr Lys Thr  
 50 55 60  
 Glu Val Thr Ser Gly Asp Asn Trp Val Leu Phe Glu Leu Thr Asp Val  
 65 70 75 80  
 Gln Glu Asp Ser Lys Leu Ile Cys Phe Ser Asn Cys His Asp Glu Thr  
 85 90 95  
 Met Ala Pro Ile Asp Leu Thr Val Tyr Trp Phe Pro Glu Arg Val Glu  
 100 105 110  
 Leu Ala Pro Leu Pro Arg Trp Gln Pro Val Gly Glu Asn Leu Thr Met  
 115 120 125

Thr Cys Gln Val Ala Gly Gly Ala Pro Arg Thr Asn Leu Thr Val Val  
 130 135 140  
 Leu Leu Arg Gly Glu Glu Glu Leu Ser Arg Gln Pro Ala Val Gly Glu  
 145 150 155 160  
 Pro Ala Glu Val Thr Phe Thr Val Ala Val Gly Arg Glu Asp His Leu  
 165 170 175  
 Ala Asn Phe Ser Cys Arg Thr Asp Leu Asp Leu Arg His Arg Gly Leu  
 180 185 190  
 Gly Leu Phe Gln Asn Ser Ser Ala Pro Arg Gln Leu Gln Thr Phe Val  
 195 200 205  
 Leu Pro Glu Thr Pro Pro Arg Leu Ala Thr Pro Pro Ile Val Glu Val  
 210 215 220  
 Gly Thr Gln Trp Ser Val Asp Cys Thr Met Asp Gly Val Phe Pro Ala  
 225 230 235 240  
 Ser Glu Ala Gln Val His Leu Ala Leu Ala Glu Glu Arg Leu His Ser  
 245 250 255  
 Thr Val Leu Tyr Lys Lys Asp Ser Leu Leu Ala Thr Ala Asn Val Lys  
 260 265 270  
 Ala Asn Pro Glu Asp Glu Gly Thr Gln Gln Leu Trp Cys Glu Val Thr  
 275 280 285  
 Leu Gly Asp Glu Asn Arg Arg Trp Gln Glu Asn Val Thr Phe Tyr Ser  
 290 295 300  
 Phe Pro Ala Pro Asn Leu Thr Leu Ser Glu Pro Glu Val Ser Glu Trp  
 305 310 315 320  
 Thr Thr Val Thr Val Glu Cys Glu Ala Pro Ala Gly Val Val Val Ser  
 325 330 335  
 Leu Ser Gly Leu Pro Ser Gly Leu Ala Val Pro Arg Ala Gln Phe Gln  
 340 345 350  
 Leu Asn Ala Ser Ala Ala Asp Asn Arg Arg Ser Phe Ser Cys Ser Ala  
 355 360 365  
 Ala Leu Glu Val Ala Gly His Met Leu Gln Lys Asn Gln Thr Arg Glu  
 370 375 380  
 Leu His Val Leu Tyr Gly Pro Arg Leu Asp Gln Arg Asp Cys Pro Gly  
 385 390 395 400  
 Asn Trp Thr Trp Glu Glu Gly Phe His Gln Thr Leu Lys Cys Gln Ala  
 405 410 415  
 Trp Gly Asn Pro Val Pro Glu Leu Lys Cys His Arg Lys Gly Asp Asp  
 420 425 430

Ala Leu Leu Pro Ile Gly Asp Leu Arg Pro Val Lys Arg Glu Val Ala  
 435 440 445

Gly Thr Tyr Leu Cys Gln Ala Arg Ser Pro Arg Gly Glu Ile Thr Arg  
 450 455 460

Glu Val Val Ile Asn Val Ile Tyr His Gln Asn Asn Ile Leu Ile Ile  
 465 470 475 480

Ile Leu Val Thr Thr Ile Val Ile Leu Gly Thr Val Ser Val Ala Ala  
 485 490 495

Tyr Leu Tyr Asn Arg Gln Arg Lys Ile Gln Lys Tyr Lys Leu Gln Lys  
 500 505 510

Ala Gln Glu Ala Ala Ala Met Lys Leu Asn Thr Pro Ala Thr Pro Pro  
 515 520 525

<210> 84

<211> 535

<212> PRT

<213> Bos taurus

<400> 84

Met Ala Leu Gly Ala Ala Pro Ala Ala Gln Leu Ala Leu Leu Ala Leu  
 1 5 10 15

Leu Gly Thr Leu Leu Pro Gly Pro Gly Gly Ala Gly Ile Ser Ile His  
 20 25 30

Pro Ser Lys Ala Ile Ile Pro Arg Gly Asp Ser Leu Thr Val Asn Cys  
 35 40 45

Ser Asn Ser Cys Asp Gln Lys Ser Thr Phe Gly Leu Glu Thr Val Leu  
 50 55 60

Ile Lys Glu Glu Val Gly Arg Gly Asp Asn Trp Lys Val Phe Gln Leu  
 65 70 75 80

Arg Asp Val Gln Glu Asp Ile Glu Leu Phe Cys Tyr Ser Asn Cys His  
 85 90 95

Lys Glu Gln Thr Ile Ala Ser Met Asn Leu Thr Val Tyr Trp Phe Pro  
 100 105 110

Glu His Val Glu Leu Ala Pro Leu Pro Leu Trp Gln Pro Val Gly Glu  
 115 120 125

Glu Leu Asn Leu Ser Cys Leu Val Ser Gly Gly Ala Pro Arg Ala His  
 130 135 140

Leu Ser Val Val Leu Leu Arg Gly Glu Glu Glu Leu Gly Arg Gln Pro  
 145 150 155 160

Val Gly Lys Gly Glu Pro Ala Lys Val Met Phe Thr Val Gln Ser Arg  
 165 170 175

Arg	Glu	Asp	His	Gly	Thr	Asn	Phe	Ser	Cys	Arg	Trp	Glu	Leu	Asp	Leu	180	185	190	
Arg	Ser	Gln	Gly	Leu	Glu	Leu	Phe	Gln	Asn	Thr	Ser	Ala	Pro	Arg	Lys	195	200	205	
Leu	Gln	Thr	Tyr	Val	Leu	Pro	Ser	Ile	Asp	Pro	His	Leu	Glu	Val	Pro	210	215	220	
Pro	Ile	Val	Glu	Val	Gly	Ser	Arg	Trp	Pro	Val	Asn	Cys	Thr	Leu	Asp	225	230	235	240
Gly	Leu	Phe	Pro	Ala	Ser	Asp	Ala	Lys	Val	Tyr	Leu	Val	Leu	Gly	Asp	245	250	255	
Gln	Lys	Leu	Glu	Ser	Asn	Ile	Thr	Tyr	Asp	Gly	Asp	Ser	Val	Leu	Ala	260	265	270	
Lys	Ala	Trp	Met	Glu	Glu	Asn	Glu	Glu	Gly	Thr	His	Ser	Leu	Lys	Cys	275	280	285	
Ser	Val	Thr	Leu	Gly	Glu	Val	Ser	Arg	Arg	Thr	Gln	Glu	Asn	Val	Thr	290	295	300	
Val	Tyr	Ser	Phe	Pro	Leu	Pro	Thr	Leu	Thr	Leu	Ser	Pro	Pro	Glu	Val	305	310	315	320
Ser	Glu	Trp	Thr	Thr	Val	Thr	Val	Glu	Cys	Val	Thr	Arg	Asp	Gly	Ala	325	330	335	
Val	Val	Lys	Leu	Asn	Gly	Thr	Ser	Ala	Val	Pro	Pro	Gly	Pro	Arg	Ala	340	345	350	
Gln	Leu	Lys	Leu	Asn	Ala	Ser	Ala	Ser	Asp	His	Arg	Ser	Asn	Phe	Ser	355	360	365	
Cys	Ser	Ala	Ala	Leu	Glu	Ile	Ala	Gly	Gln	Val	Val	His	Lys	His	Gln	370	375	380	
Thr	Leu	Glu	Leu	His	Val	Leu	Tyr	Gly	Pro	Arg	Leu	Asp	Gln	Arg	Asp	385	390	395	400
Cys	Pro	Gly	Asn	Trp	Thr	Trp	Gln	Glu	Gly	Ser	Glu	Gln	Thr	Leu	Lys	405	410	415	
Cys	Glu	Ala	Gln	Gly	Asn	Pro	Ile	Pro	Lys	Leu	Asn	Cys	Ser	Arg	Lys	420	425	430	
Gly	Asp	Gly	Ala	Ser	Leu	Pro	Ile	Gly	Asp	Leu	Arg	Pro	Val	Arg	Arg	435	440	445	
Glu	Val	Ala	Gly	Thr	Tyr	Leu	Cys	Arg	Ala	Thr	Ser	Ala	Arg	Gly	Arg	450	455	460	
Val	Thr	Arg	Glu	Val	Val	Leu	Asn	Val	Leu	His	Gly	Gln	Asn	Ile	Leu	465	470	475	480

Asp Ile Val Ile Pro Val Val Ala Val Thr Leu Ile Leu Gly Ala Leu  
 485 490 495

Gly Thr Ala Gly Tyr Val Tyr Asn Tyr Gln Arg Lys Ile Gln Lys Tyr  
 500 505 510

Glu Leu Gln Lys Ala Arg Lys Ala Gln Glu Glu Ala Ala Leu Lys Leu  
 515 520 525

Asn Ala Gln Ser Thr Pro Pro  
 530 535

<210> 85

<211> 530

<212> PRT

<213> Ovis aries

<400> 85

Met Ala Pro Gly Ala Ala Pro Ala Ala Leu Leu Ala Leu Leu Val Leu  
 1 5 10 15

Leu Gly Thr Leu Leu Pro Gly Ser Gly Gly Ala Glu Ile Ser Ile His  
 20 25 30

Pro Pro Lys Ala Ile Ile Pro Arg Gly Gly Ser Leu Arg Val Asn Cys  
 35 40 45

Ser Ile Ser Cys Asp Arg Lys Thr Thr Phe Gly Leu Glu Thr Val Leu  
 50 55 60

Asn Lys Glu Glu Val Ser Arg Gly Pro Asn Trp Lys Val Phe Glu Leu  
 65 70 75 80

Ser Asp Val Gln Glu Glu Ile Asn Pro Leu Cys Tyr Ser Asn Cys His  
 85 90 95

Gly Glu Gln Ile Val Ala Ser Met Asn Leu Thr Ile Tyr Trp Phe Pro  
 100 105 110

Glu Arg Val Glu Leu Ala Pro Leu Pro Leu Trp Gln Pro Val Gly Glu  
 115 120 125

Glu Leu Asn Leu Ser Cys Gln Val Ser Gly Gly Gly Pro Arg His His  
 130 135 140

Leu Ser Met Val Leu Leu Arg Gly Glu Glu Glu Leu Asp Arg Gln Pro  
 145 150 155 160

Val Gly Lys Glu Glu Pro Ala Glu Val Thr Phe Met Val Gln Pro Arg  
 165 170 175

Arg Glu Asp His Gly Thr Ser Phe Ser Cys Arg Trp Glu Leu Asp Leu  
 180 185 190

Arg Ser Gln Gly Leu Glu Leu Phe Gln Asn Thr Ser Ala Pro Arg Lys  
 195 200 205

Leu	Gln	Thr	Tyr	Val	Leu	Pro	Ser	Thr	Asp	Pro	His	Leu	Glu	Ala	Pro	210	215	220	
Pro	Val	Val	Glu	Val	Gly	Ser	Arg	Trp	Pro	Val	Lys	Cys	Thr	Leu	Asp	225	230	235	240
Gly	Leu	Phe	Pro	Ala	Ser	Asp	Ala	Glu	Val	Tyr	Val	Gln	Leu	Gly	Asp	245	250	255	
Gln	Lys	Leu	Glu	Ser	Asn	Ile	Thr	Tyr	Asn	Gly	Asp	Ser	Val	Leu	Ala	260	265	270	
Glu	Ala	Trp	Thr	Glu	Glu	Asn	Glu	Glu	Gly	Thr	His	Ser	Leu	Arg	Cys	275	280	285	
Ser	Val	Ser	Leu	Gly	Glu	Lys	Ile	Arg	Arg	Thr	Arg	Gly	Ser	Val	Thr	290	295	300	
Met	Tyr	Ser	Phe	Pro	Leu	Pro	Thr	Leu	Thr	Leu	Ser	Pro	Pro	Glu	Val	305	310	315	320
Ser	Glu	Trp	Thr	Thr	Val	Thr	Val	Glu	Cys	Val	Thr	Arg	Asp	Gly	Ala	325	330	335	
Val	Val	Arg	Leu	Asn	Gly	Val	Ser	Ala	Glu	Pro	Pro	Gly	Pro	Arg	Ala	340	345	350	
Gln	Leu	Lys	Leu	Asn	Val	Ser	Ala	Asp	Asp	His	Gly	Ser	Asn	Phe	Ser	355	360	365	
Cys	Ser	Ala	Ala	Leu	Lys	Ile	Ala	Gly	Gln	Glu	Val	His	Lys	Ile	Gln	370	375	380	
Thr	Arg	Glu	Leu	His	Val	Leu	Tyr	Gly	Pro	Arg	Leu	Asp	Gln	Arg	Asp	385	390	395	400
Cys	Leu	Gly	Asn	Trp	Thr	Trp	Gln	Glu	Gly	Ser	Glu	Gln	Thr	Leu	Lys	405	410	415	
Cys	Ala	Ala	Arg	Gly	Asn	Pro	Ile	Pro	Lys	Leu	Asn	Cys	Ser	Arg	Lys	420	425	430	
Gly	Asp	Gly	Ala	Ser	Leu	Pro	Ile	Gly	Asp	Leu	Arg	Pro	Val	Thr	Arg	435	440	445	
Glu	Val	Ala	Gly	Thr	Tyr	Leu	Cys	Trp	Ala	Thr	Ser	Ala	Arg	Gly	Gly	450	455	460	
Val	Thr	Arg	Glu	Val	Val	Leu	Asn	Val	Leu	Tyr	Gly	Gln	Asn	Ile	Leu	465	470	475	480
Asp	Ile	Val	Ile	Pro	Val	Val	Ala	Val	Thr	Leu	Ile	Leu	Gly	Thr	Leu	485	490	495	
Gly	Thr	Ala	Gly	Tyr	Ile	Tyr	Asn	Tyr	Gln	Arg	Lys	Ile	Gln	Lys	Tyr	500	505	510	

Glu Leu Gln Lys Ala Gln Lys Glu Ala Ala Leu Lys Leu Lys Ser Thr  
 515 520 525

Pro Pro  
 530

<210> 86  
 <211> 545  
 <212> PRT  
 <213> Rattus norvegicus

<400> 86  
 Met Ala Ser Thr Arg Ala Arg Pro Met Leu Pro Leu Leu Leu Val Leu  
 1 5 10 15  
 Val Ala Val Val Ile Pro Gly Pro Val Gly Ala Gln Val Ser Ile His  
 20 25 30  
 Pro Thr Glu Ala Phe Leu Pro Arg Gly Gly Ser Val Gln Val Asn Cys  
 35 40 45  
 Ser Ser Ser Cys Glu Asp Glu Asn Leu Gly Leu Gly Leu Glu Thr Asn  
 50 55 60  
 Trp Met Lys Asp Glu Leu Ser Ser Gly His Asn Trp Lys Leu Phe Lys  
 65 70 75 80  
 Leu Ser Asp Ile Gly Glu Asp Ser Arg Pro Leu Cys Phe Glu Asn Cys  
 85 90 95  
 Gly Thr Thr Gln Ser Ser Ala Ser Ala Thr Ile Thr Val Tyr Ser Phe  
 100 105 110  
 Pro Glu Arg Val Glu Leu Asp Pro Leu Pro Ala Trp Gln Gln Val Gly  
 115 120 125  
 Lys Asn Leu Ile Leu Arg Cys Leu Val Glu Gly Gly Ala Pro Arg Thr  
 130 135 140  
 Gln Leu Ser Val Val Leu Leu Arg Gly Asn Glu Thr Leu Ser Arg Gln  
 145 150 155 160  
 Ala Val Asp Gly Asp Pro Lys Glu Ile Thr Phe Thr Val Leu Ala Ser  
 165 170 175  
 Arg Gly Asp His Gly Ala Asn Phe Ser Cys Phe Thr Glu Leu Asp Leu  
 180 185 190  
 Arg Pro Gln Gly Leu Ser Leu Phe Lys Asn Val Ser Glu Val Arg Gln  
 195 200 205  
 Leu Arg Thr Phe Asp Leu Pro Thr Arg Val Leu Lys Leu Asp Thr Pro  
 210 215 220  
 Asp Leu Leu Glu Val Gly Thr Gln Gln Lys Phe Leu Cys Ser Leu Glu  
 225 230 235 240

Gly	Leu	Phe	Pro	Ala	Ser	Glu	Ala	Gln	Ile	Tyr	Leu	Glu	Met	Gly	Gly	245	250	255
Gln	Met	Leu	Thr	Leu	Glu	Ser	Thr	Asn	Ser	Arg	Asp	Phe	Val	Ser	Ala	260	265	270
Thr	Ala	Ser	Val	Glu	Val	Thr	Glu	Lys	Leu	Asp	Arg	Thr	Leu	Gln	Leu	275	280	285
Arg	Cys	Val	Leu	Glu	Leu	Ala	Asp	Gln	Thr	Leu	Glu	Met	Glu	Lys	Thr	290	295	300
Leu	Arg	Ile	Tyr	Asn	Phe	Ser	Ala	Pro	Ile	Leu	Thr	Leu	Ser	Gln	Pro	305	310	315
Glu	Val	Ser	Glu	Gly	Asp	Gln	Val	Thr	Val	Lys	Cys	Glu	Ala	His	Gly	325	330	335
Gly	Ala	Gln	Val	Val	Leu	Leu	Asn	Ser	Thr	Ser	Pro	Arg	Pro	Pro	Thr	340	345	350
Ser	Gln	Gly	Thr	Ser	Pro	Arg	Pro	Pro	Thr	Ser	Gln	Ile	Gln	Phe	Thr	355	360	365
Leu	Asn	Ala	Ser	Pro	Glu	Asp	His	Lys	Arg	Arg	Phe	Phe	Cys	Ser	Ala	370	375	380
Ala	Leu	Glu	Val	Asp	Gly	Lys	Ser	Leu	Phe	Lys	Asn	Gln	Thr	Leu	Glu	385	390	395
Leu	His	Val	Leu	Tyr	Gly	Pro	His	Leu	Asp	Lys	Lys	Asp	Cys	Leu	Gly	405	410	415
Asn	Trp	Thr	Trp	Gln	Glu	Gly	Ser	Gln	Gln	Thr	Leu	Thr	Cys	Gln	Pro	420	425	430
Gln	Gly	Asn	Pro	Ala	Pro	Asn	Leu	Thr	Cys	Ser	Arg	Lys	Ala	Asp	Gly	435	440	445
Val	Pro	Leu	Pro	Ile	Gly	Met	Val	Lys	Ser	Val	Lys	Arg	Glu	Met	Asn	450	455	460
Gly	Thr	Tyr	Lys	Cys	Arg	Ala	Phe	Ser	Ser	Arg	Gly	Ser	Ile	Thr	Arg	465	470	475
Asp	Val	His	Leu	Thr	Val	Leu	Tyr	His	Asp	Gln	Asn	Thr	Trp	Val	Ile	485	490	495
Ile	Val	Gly	Val	Leu	Val	Leu	Ile	Ile	Ala	Gly	Phe	Val	Ile	Val	Ala	500	505	510
Ser	Ile	Tyr	Thr	Tyr	Tyr	Arg	Gln	Arg	Lys	Ile	Arg	Ile	Tyr	Lys	Leu	515	520	525
Gln	Lys	Ala	Gln	Glu	Glu	Ala	Leu	Lys	Leu	Lys	Val	Gln	Ala	Pro	Pro	530	535	540

Pro  
545

<210> 87  
<211> 917  
<212> PRT  
<213> Rattus norvegicus

<400> 87

Met	Pro	Gly	Pro	Ser	Pro	Gly	Leu	Arg	Arg	Thr	Leu	Leu	Gly	Leu	Trp
1				5					10					15	
Ala	Ala	Leu	Gly	Leu	Gly	Ile	Leu	Gly	Ile	Ser	Ala	Val	Ala	Leu	Glu
			20					25					30		
Pro	Phe	Trp	Ala	Asp	Leu	Gln	Pro	Arg	Val	Ala	Leu	Val	Glu	Arg	Gly
		35					40					45			
Gly	Ser	Leu	Trp	Leu	Asn	Cys	Ser	Thr	Asn	Cys	Pro	Arg	Pro	Glu	Arg
	50					55					60				
Gly	Gly	Leu	Glu	Thr	Ser	Leu	Arg	Arg	Asn	Gly	Thr	Gln	Arg	Gly	Leu
	65				70					75					80
Arg	Trp	Leu	Ala	Arg	Gln	Leu	Val	Asp	Ile	Arg	Glu	Pro	Glu	Thr	Gln
				85					90					95	
Pro	Val	Cys	Phe	Phe	Arg	Cys	Ala	Arg	Arg	Thr	Leu	Gln	Ala	Arg	Gly
			100					105					110		
Leu	Ile	Arg	Thr	Phe	Gln	Arg	Pro	Asp	Arg	Val	Glu	Leu	Val	Pro	Leu
		115					120					125			
Pro	Pro	Trp	Gln	Pro	Val	Gly	Glu	Asn	Phe	Thr	Leu	Ser	Cys	Arg	Val
	130					135					140				
Pro	Gly	Ala	Gly	Pro	Arg	Ala	Ser	Leu	Thr	Leu	Thr	Leu	Leu	Arg	Gly
	145				150					155				160	
Gly	Gln	Glu	Leu	Ile	Arg	Arg	Ser	Phe	Val	Gly	Glu	Pro	Pro	Arg	Ala
			165						170					175	
Arg	Gly	Ala	Met	Leu	Thr	Ala	Thr	Val	Leu	Ala	Arg	Arg	Glu	Asp	His
			180					185					190		
Arg	Ala	Asn	Phe	Ser	Cys	Leu	Ala	Glu	Leu	Asp	Leu	Arg	Pro	His	Gly
		195					200					205			
Leu	Gly	Leu	Phe	Ala	Asn	Ser	Ser	Ala	Pro	Arg	Gln	Leu	Arg	Thr	Phe
	210					215					220				
Ala	Met	Pro	Pro	Leu	Ser	Pro	Ser	Leu	Ile	Ala	Pro	Arg	Phe	Leu	Glu
	225				230					235				240	
Val	Gly	Ser	Glu	Arg	Pro	Val	Thr	Cys	Thr	Leu	Asp	Gly	Leu	Phe	Pro
				245					250					255	

Ala Pro Glu Ala Gly Val Tyr Leu Ser Leu Gly Asp Gln Arg Leu His  
 260 265 270  
 Pro Asn Val Thr Leu Asp Gly Glu Ser Leu Val Ala Thr Ala Thr Ala  
 275 280 285  
 Thr Ala Ser Glu Glu Gln Glu Gly Thr Lys Gln Leu Met Cys Ile Val  
 290 295 300  
 Thr Leu Gly Gly Glu Ser Arg Glu Thr Gln Glu Asn Leu Thr Val Tyr  
 305 310 315 320  
 Ser Phe Pro Ala Pro Leu Leu Thr Leu Ser Glu Pro Glu Ala Pro Glu  
 325 330 335  
 Gly Lys Met Val Thr Val Ser Cys Trp Ala Gly Ala Arg Ala Leu Val  
 340 345 350  
 Thr Leu Glu Gly Ile Pro Ala Ala Val Pro Gly Gln Pro Ala Glu Leu  
 355 360 365  
 Gln Leu Asn Val Thr Lys Asn Asp Asp Lys Arg Gly Phe Phe Cys Asp  
 370 375 380  
 Ala Ala Leu Asp Val Asp Gly Glu Thr Leu Arg Lys Asn Gln Ser Ser  
 385 390 395 400  
 Glu Leu Arg Val Leu Tyr Ala Pro Arg Leu Asp Asp Leu Asp Cys Pro  
 405 410 415  
 Arg Ser Trp Thr Trp Pro Glu Gly Pro Glu Gln Thr Leu His Cys Glu  
 420 425 430  
 Ala Arg Gly Asn Pro Glu Pro Ser Val His Cys Ala Arg Pro Asp Gly  
 435 440 445  
 Gly Ala Val Leu Ala Leu Gly Leu Leu Gly Pro Val Thr Arg Ala Leu  
 450 455 460  
 Ala Gly Thr Tyr Arg Cys Thr Ala Ile Asn Gly Gln Gly Gln Ala Val  
 465 470 475 480  
 Lys Asp Val Thr Leu Thr Val Glu Tyr Ala Pro Ala Leu Asp Ser Val  
 485 490 495  
 Gly Cys Pro Glu Arg Ile Thr Trp Leu Glu Gly Thr Glu Ala Ser Leu  
 500 505 510  
 Ser Cys Val Ala His Gly Val Pro Pro Pro Ser Val Ser Cys Val Arg  
 515 520 525  
 Ser Gly Lys Glu Glu Val Met Glu Gly Pro Leu Arg Val Ala Arg Glu  
 530 535 540  
 His Ala Gly Thr Tyr Arg Cys Glu Ala Ile Asn Ala Arg Gly Ser Ala  
 545 550 555 560

Ala Lys Asn Val Ala Val Thr Val Glu Tyr Gly Pro Ser Phe Glu Glu  
 565 570 575  
 Leu Gly Cys Pro Ser Asn Trp Thr Trp Val Glu Gly Ser Gly Lys Leu  
 580 585 590  
 Phe Ser Cys Glu Val Asp Gly Lys Pro Glu Pro Arg Val Glu Cys Val  
 595 600 605  
 Gly Ser Glu Gly Ala Ser Glu Gly Val Val Leu Pro Leu Val Ser Ser  
 610 615 620  
 Asn Ser Gly Ser Arg Asn Ser Met Thr Pro Gly Asn Leu Ser Pro Gly  
 625 630 635 640  
 Ile Tyr Leu Cys Asn Ala Thr Asn Arg His Gly Ser Thr Val Lys Thr  
 645 650 655  
 Val Val Val Ser Ala Glu Ser Pro Pro Gln Met Asp Glu Ser Ser Cys  
 660 665 670  
 Pro Ser His Gln Thr Trp Leu Glu Gly Ala Glu Ala Thr Ala Leu Ala  
 675 680 685  
 Cys Ser Ala Arg Gly Arg Pro Ser Pro Arg Val Arg Cys Ser Arg Glu  
 690 695 700  
 Gly Ala Ala Arg Leu Glu Arg Leu Gln Val Ser Arg Glu Asp Ala Gly  
 705 710 715 720  
 Thr Tyr Leu Cys Val Ala Thr Asn Ala His Gly Thr Asp Ser Arg Thr  
 725 730 735  
 Val Thr Val Gly Val Glu Tyr Arg Pro Val Val Ala Glu Leu Ala Ala  
 740 745 750  
 Ser Pro Pro Ser Val Arg Pro Gly Gly Asn Phe Thr Leu Thr Cys Arg  
 755 760 765  
 Ala Glu Ala Trp Pro Pro Ala Gln Ile Ser Trp Arg Ala Pro Pro Gly  
 770 775 780  
 Ala Leu Asn Leu Gly Leu Ser Ser Asn Asn Ser Thr Leu Ser Val Ala  
 785 790 795 800  
 Gly Ala Met Gly Ser His Gly Gly Glu Tyr Glu Cys Ala Ala Thr Asn  
 805 810 815  
 Ala His Gly Arg His Ala Arg Arg Ile Thr Val Arg Val Ala Gly Pro  
 820 825 830  
 Trp Leu Trp Val Ala Val Gly Gly Ala Ala Gly Gly Ala Ala Leu Leu  
 835 840 845  
 Ala Ala Gly Ala Gly Leu Ala Phe Tyr Val Gln Ser Thr Ala Cys Lys  
 850 855 860

Lys Gly Glu Tyr Asn Val Gln Glu Ala Glu Ser Ser Gly Glu Ala Val  
 865 870 875 880

Cys Leu Asn Gly Ala Gly Gly Thr Pro Gly Ala Glu Gly Gly Ala Glu  
 885 890 895

Thr Pro Gly Thr Ala Glu Ser Pro Ala Asp Gly Glu Val Phe Ala Ile  
 900 905 910

Gln Leu Thr Ser Ser  
 915

<210> 88  
 <211> 151  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> MOD\_RES  
 <222> (12)  
 <223> Any amino acid

<220>  
 <221> MOD\_RES  
 <222> (77)..(81)  
 <223> Any amino acid

<220>  
 <221> MOD\_RES  
 <222> (132)  
 <223> Any amino acid

<220>  
 <221> MOD\_RES  
 <222> (145)..(147)  
 <223> Any amino acid

<400> 88  
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 20 25 30

Leu Ala Pro Leu Pro Ser Trp Gln Pro Val Gly Lys Asn Leu Thr Leu  
 35 40 45

Arg Cys Gln Val Glu Gly Gly Ala Pro Arg Ala Asn Leu Thr Val Val  
 50 55 60

Leu Leu Arg Gly Glu Lys Glu Leu Lys Arg Glu Pro Xaa Xaa Xaa Xaa  
 65 70 75 80

Xaa Ala Glu Val Thr Thr Thr Val Leu Val Arg Arg Asp His His Gly  
 85 90 95

Ala Asn Phe Ser Cys Arg Thr Glu Leu Asp Leu Arg Pro Gln Gly Leu  
 100 105 110

Glu Leu Phe Glu Asn Thr Ser Ala Pro Tyr Gln Leu Gln Thr Phe Val  
 115 120 125

Leu Pro Ala Xaa Pro Pro Gln Leu Val Ser Pro Arg Val Leu Glu Val  
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Xaa Xaa Xaa Gly Thr Val Val  
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<210> 89

<211> 1252

<212> PRT

<213> Rattus norvegicus

<400> 89

Met Gly Ala Lys Arg Val Thr Val Arg Gly Ala Arg Thr Ser Pro Ile  
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His Arg Met Ser Ser Leu Thr Pro Leu Leu Leu Met Gly Met Leu Thr  
 20 25 30

Ser Gly Leu Ala Glu Ser Pro Val Pro Thr Ser Ala Pro Arg Gly Phe  
 35 40 45

Trp Ala Leu Ser Glu Asn Leu Thr Ala Val Glu Gly Thr Thr Val Lys  
 50 55 60

Leu Trp Cys Gly Val Arg Ala Pro Gly Ser Val Val Gln Trp Ala Lys  
 65 70 75 80

Asp Gly Leu Leu Leu Gly Pro Asn Pro Lys Met Pro Gly Phe Pro Arg  
 85 90 95

Tyr Ser Leu Glu Gly Asp Arg Ala Lys Gly Glu Phe His Leu Leu Ile  
 100 105 110

Glu Ala Cys Asp Leu Ser Asp Asp Ala Glu Tyr Glu Cys Gln Val Gly  
 115 120 125

Arg Ser Glu Leu Gly Pro Glu Leu Val Ser Pro Lys Val Ile Leu Ser  
 130 135 140

Ile Leu Val Ser Pro Lys Val Leu Leu Leu Thr Pro Glu Ala Gly Ser  
 145 150 155 160

Thr Val Thr Trp Val Ala Gly Gln Glu Tyr Val Val Thr Cys Val Ser  
 165 170 175

Gly Asp Ala Lys Pro Ala Pro Asp Ile Thr Phe Ile Gln Ser Gly Arg  
 180 185 190

Thr Ile Leu Asp Val Ser Ser Asn Val Asn Glu Gly Ser Glu Glu Lys  
 195 200 205

Leu Cys Ile Thr Glu Ala Glu Ala Arg Val Ile Pro Gln Ser Ser Asp  
 210 215 220  
 Asn Gly Gln Leu Leu Val Cys Glu Gly Ser Asn Pro Ala Leu Asp Thr  
 225 230 235 240  
 Pro Ile Lys Ala Ser Phe Thr Met Asn Ile Leu Phe Pro Pro Gly Pro  
 245 250 255  
 Pro Val Ile Asp Trp Pro Gly Leu Asn Glu Gly His Val Arg Ala Gly  
 260 265 270  
 Glu Asn Leu Glu Leu Pro Cys Thr Ala Arg Gly Gly Asn Pro Pro Ala  
 275 280 285  
 Thr Leu Gln Trp Leu Lys Asn Gly Lys Pro Val Ser Thr Ala Trp Gly  
 290 295 300  
 Thr Glu His Ala Gln Ala Val Ala His Ser Val Leu Val Met Thr Val  
 305 310 315 320  
 Arg Pro Glu Asp His Gly Ala Arg Leu Ser Cys Gln Ser Tyr Asn Ser  
 325 330 335  
 Val Ser Ala Gly Thr Gln Glu Arg Ser Ile Thr Leu Gln Val Thr Phe  
 340 345 350  
 Pro Pro Ser Ala Ile Thr Ile Leu Gly Ser Val Ser Gln Ser Glu Asn  
 355 360 365  
 Lys Asn Val Thr Leu Cys Cys Leu Thr Lys Ser Ser Arg Pro Arg Val  
 370 375 380  
 Leu Leu Arg Trp Trp Leu Gly Gly Arg Gln Leu Leu Pro Thr Asp Glu  
 385 390 395 400  
 Thr Val Met Asp Gly Leu His Gly Gly His Ile Ser Met Ser Asn Leu  
 405 410 415  
 Thr Phe Leu Val Arg Arg Glu Asp Asn Gly Leu Pro Leu Thr Cys Glu  
 420 425 430  
 Ala Phe Ser Asp Ala Phe Ser Lys Glu Thr Phe Lys Lys Ser Leu Thr  
 435 440 445  
 Leu Asn Val Lys Tyr Pro Ala Gln Lys Leu Trp Ile Glu Gly Pro Pro  
 450 455 460  
 Glu Gly Gln Tyr Ile Arg Thr Gly Thr Arg Val Arg Leu Val Cys Leu  
 465 470 475 480  
 Ala Ile Gly Gly Asn Pro Asp Pro Ser Leu Ile Trp Phe Lys Asp Ser  
 485 490 495  
 Arg Pro Val Ser Glu Pro Arg Gln Pro Gln Glu Pro Arg Arg Val Gln  
 500 505 510

Leu Gly Ser Val Glu Lys Ser Gly Ser Thr Phe Ser Arg Glu Leu Val  
 515 520 525  
 Leu Ile Ile Gly Pro Pro Asp Asn Arg Ala Lys Phe Ser Cys Lys Ala  
 530 535 540  
 Gly Gln Leu Ser Ala Ser Thr Gln Leu Val Val Gln Phe Pro Pro Thr  
 545 550 555 560  
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 580 585 590  
 Ser Trp Asp Lys Glu Gly Glu Arg Leu Glu Asp Val Ala Ala Lys Pro  
 595 600 605  
 Gln Ser Ala Pro Phe Lys Gly Ser Ala Ala Ser Arg Ser Val Phe Leu  
 610 615 620  
 Arg Val Ser Ser Arg Asp His Gly Gln Arg Val Thr Cys Arg Ala His  
 625 630 635 640  
 Ser Glu Ala Leu Arg Glu Thr Val Ser Ser Phe Tyr Arg Phe Asn Val  
 645 650 655  
 Leu Tyr Pro Pro Glu Phe Leu Gly Glu Gln Val Arg Ala Val Thr Val  
 660 665 670  
 Val Glu Gln Gly Gln Val Leu Leu Pro Val Ser Val Ser Ala Asn Pro  
 675 680 685  
 Ala Pro Glu Ala Phe Asn Trp Thr Phe Arg Gly Tyr Arg Leu Ser Pro  
 690 695 700  
 Ala Gly Gly Pro Arg His Arg Ile Leu Ser Gly Gly Ala Leu Gln Leu  
 705 710 715 720  
 Trp Asn Val Thr Arg Ala Asp Asp Gly Phe Tyr Gln Leu His Cys Gln  
 725 730 735  
 Asn Ser Glu Gly Thr Ala Glu Ala Leu Leu Lys Leu Asp Val His Tyr  
 740 745 750  
 Ala Pro Thr Ile Arg Ala Leu Arg Asp Pro Thr Glu Val Asn Val Gly  
 755 760 765  
 Gly Ser Val Asp Ile Val Cys Thr Val Asp Ala Asn Pro Ile Leu Pro  
 770 775 780  
 Glu Met Phe Ser Trp Glu Arg Leu Gly Glu Glu Glu Glu Asp Leu Asn  
 785 790 795 800  
 Leu Asp Asp Met Glu Lys Val Ser Lys Gly Ser Thr Gly Arg Leu Arg  
 805 810 815

Ile Arg Gln Ala Lys Leu Ser Gln Ala Gly Ala Tyr Gln Cys Ile Val  
 820 825 830  
 Asp Asn Gly Val Ala Pro Ala Ala Arg Gly Leu Val Arg Leu Val Val  
 835 840 845  
 Arg Phe Ala Pro Gln Val Asp Gln Pro Thr Pro Leu Thr Lys Val Ala  
 850 855 860  
 Ala Ala Gly Asp Ser Thr Ser Ser Ala Thr Leu His Cys Arg Ala Arg  
 865 870 875 880  
 Gly Val Pro Asn Ile Asp Phe Thr Trp Thr Lys Asn Gly Val Pro Leu  
 885 890 895  
 Asp Leu Gln Asp Pro Arg Tyr Thr Glu His Arg Tyr His Gln Gly Val  
 900 905 910  
 Val His Ser Ser Leu Leu Thr Ile Ala Asn Val Ser Ala Ala Gln Asp  
 915 920 925  
 Tyr Ala Leu Phe Lys Cys Thr Ala Thr Asn Ala Leu Gly Ser Asp His  
 930 935 940  
 Thr Asn Ile Gln Leu Val Ser Ile Ser Arg Pro Asp Pro Pro Leu Gly  
 945 950 955 960  
 Leu Lys Val Val Ser Ile Ser Pro His Ser Val Gly Leu Glu Trp Lys  
 965 970 975  
 Pro Gly Phe Asp Gly Gly Leu Pro Gln Arg Phe Gln Ile Arg Tyr Glu  
 980 985 990  
 Ala Leu Glu Thr Pro Gly Phe Leu His Val Asp Val Leu Pro Thr Gln  
 995 1000 1005  
 Ala Thr Thr Phe Thr Leu Thr Gly Leu Lys Pro Ser Thr Arg Tyr Arg  
 1010 1015 1020  
 Ile Trp Leu Leu Ala Ser Asn Ala Leu Gly Asp Ser Gly Leu Thr Asp  
 1025 1030 1035 1040  
 Lys Gly Ile Gln Val Ser Val Thr Thr Pro Gly Pro Asp Gln Ala Pro  
 1045 1050 1055  
 Glu Asp Thr Asp His Gln Leu Pro Thr Glu Leu Pro Pro Gly Pro Pro  
 1060 1065 1070  
 Arg Leu Pro Leu Leu Pro Val Leu Phe Ala Val Gly Gly Leu Leu Leu  
 1075 1080 1085  
 Leu Ser Asn Ala Ser Cys Val Gly Gly Leu Leu Trp Arg Arg Arg Leu  
 1090 1095 1100  
 Arg Arg Leu Ala Glu Glu Ile Ser Glu Lys Thr Glu Ala Gly Ser Glu  
 1105 1110 1115 1120

Glu Ala Cys Asp Leu Ser Asp Asp Ala Glu Tyr Glu Cys Gln Val Gly  
115 120 125

Arg	Ser	Glu	Leu	Gly	Pro	Glu	Leu	Val	Ser	Pro	Arg	Val	Ile	Leu	Ser
130						135					140				
Val	Leu	Val	Pro	Pro	Lys	Val	Leu	Gln	Leu	Thr	Pro	Glu	Ala	Gly	Ser
145					150					155					160
Thr	Val	Thr	Trp	Val	Ala	Gly	Gln	Glu	Tyr	Val	Val	Thr	Cys	Val	Ser
				165					170					175	
Gly	Gly	Ala	Lys	Pro	Ala	Pro	Asp	Ile	Ile	Phe	Ile	Gln	Gly	Gly	Arg
			180					185					190		
Thr	Val	Glu	Asp	Val	Ser	Ser	Ser	Val	Asn	Glu	Gly	Ser	Glu	Glu	Lys
		195					200					205			
Leu	Phe	Phe	Thr	Glu	Ala	Glu	Ala	Arg	Val	Thr	Pro	Gln	Ser	Ser	Asp
	210					215					220				
Asn	Gly	Gln	Leu	Leu	Val	Cys	Glu	Gly	Ser	Asn	Pro	Ala	Leu	Ala	Thr
225					230					235					240
Pro	Ile	Lys	Ala	Ser	Phe	Thr	Met	Asn	Ile	Leu	Phe	Pro	Pro	Gly	Pro
				245					250					255	
Pro	Val	Ile	Asp	Trp	Pro	Gly	Leu	Asn	Glu	Gly	His	Val	Arg	Ala	Gly
			260					265					270		
Glu	Asn	Leu	Glu	Leu	Pro	Cys	Ile	Ala	Arg	Gly	Gly	Asn	Pro	Pro	Ala
		275					280					285			
Thr	Leu	Gln	Trp	Leu	Lys	Asn	Gly	Lys	Pro	Val	Ser	Ile	Ala	Trp	Gly
	290					295					300				
Thr	Glu	His	Ala	Gln	Ala	Val	Ala	His	Ser	Val	Leu	Val	Met	Thr	Val
305					310					315					320
Arg	Pro	Glu	Asp	His	Gly	Ala	Arg	Leu	Ser	Cys	Gln	Ser	Tyr	Asn	Ser
				325					330					335	
Val	Ser	Ala	Glu	Thr	Gln	Glu	Arg	Ser	Ile	Thr	Leu	Gln	Val	Thr	Phe
			340					345					350		
Pro	Pro	Ser	Ala	Val	Thr	Ile	Leu	Gly	Ser	Thr	Ser	Gln	Ser	Glu	Asn
		355					360					365			
Lys	Asn	Val	Thr	Leu	Cys	Cys	Leu	Thr	Lys	Ser	Ser	Arg	Pro	Arg	Val
	370					375					380				
Leu	Leu	Arg	Trp	Trp	Leu	Gly	Gly	Arg	Gln	Leu	Leu	Pro	Thr	Asp	Glu
385					390					395					400
Thr	Val	Met	Asp	Gly	Leu	His	Gly	Gly	His	Ile	Ser	Met	Ser	Asn	Leu
				405					410					415	
Thr	Leu	Leu	Val	Lys	Arg	Glu	Asp	Asn	Gly	Leu	Ser	Leu	Thr	Cys	Glu
			420					425						430	

Ala	Phe	Ser	Asp	Ala	Phe	Ser	Lys	Glu	Thr	Phe	Lys	Lys	Ser	Leu	Thr	435	440	445
Leu	Asn	Val	Lys	Tyr	Pro	Ala	Gln	Lys	Leu	Trp	Ile	Glu	Gly	Pro	Pro	450	455	460
Glu	Gly	Gln	Ser	Ile	Arg	Thr	Gly	Thr	Arg	Val	Arg	Leu	Val	Cys	Leu	465	470	475
Ala	Ile	Gly	Gly	Asn	Pro	Glu	Pro	Ser	Leu	Thr	Trp	Leu	Lys	Asp	Ser	485	490	495
Arg	Pro	Val	Asn	Asp	Pro	Arg	Gln	Ser	Gln	Glu	Pro	Arg	Arg	Val	Gln	500	505	510
Leu	Gly	Ser	Val	Glu	Lys	Ser	Gly	Ser	Thr	Phe	Ser	Arg	Glu	Leu	Val	515	520	525
Leu	Ile	Ile	Gly	Pro	Pro	Asp	Asn	Leu	Ala	Lys	Phe	Ser	Cys	Lys	Ala	530	535	540
Gly	Gln	Leu	Ser	Ala	Ser	Thr	Gln	Leu	Val	Val	Gln	Phe	Pro	Pro	Thr	545	550	555
Asn	Leu	Thr	Ile	Leu	Ala	Asn	Ser	Ser	Ala	Leu	Arg	Pro	Gly	Asp	Ala	565	570	575
Leu	Asn	Leu	Thr	Cys	Val	Ser	Ile	Ser	Ser	Asn	Pro	Pro	Val	Asn	Leu	580	585	590
Ser	Leu	Asp	Lys	Glu	Gly	Glu	Arg	Leu	Asp	Asp	Val	Ala	Ala	Lys	Pro	595	600	605
Gln	Ser	Ala	Pro	Phe	Lys	Gly	Ser	Ala	Ala	Ser	Arg	Ser	Val	Phe	Leu	610	615	620
Arg	Val	Ser	Ser	Arg	Asp	His	Gly	His	Arg	Val	Thr	Cys	Arg	Ala	His	625	630	635
Ser	Glu	Ala	Leu	Arg	Glu	Thr	Val	Ser	Ser	Phe	Tyr	Arg	Leu	Asn	Val	645	650	655
Leu	Tyr	Pro	Pro	Glu	Phe	Leu	Gly	Glu	Gln	Val	Arg	Ala	Val	Thr	Val	660	665	670
Val	Glu	Gln	Gly	Gln	Ala	Leu	Leu	Pro	Val	Ser	Val	Ser	Ala	Asn	Pro	675	680	685
Ala	Pro	Glu	Ala	Phe	Asn	Trp	Thr	Phe	Arg	Gly	Tyr	Arg	Leu	Ser	Pro	690	695	700
Ala	Gly	Gly	Pro	Arg	His	Arg	Ile	Leu	Ser	Gly	Gly	Ala	Leu	Gln	Leu	705	710	715
Trp	Asn	Val	Thr	Arg	Ala	Asp	Asp	Gly	Phe	Tyr	Gln	Leu	His	Cys	Gln	725	730	735

Asn	Ser	Glu	Gly	Thr	Ala	Glu	Ala	Leu	Lys	Leu	Asp	Val	His	Tyr
			740					745				750		
Ala	Pro	Thr	Ile	Arg	Ala	Leu	Lys	Asp	Pro	Thr	Glu	Val	Asn	Val
			755				760					765		Gly
Gly	Ser	Val	Asp	Ile	Val	Cys	Thr	Val	Asp	Ala	Asn	Pro	Ile	Leu
			770			775					780			Pro
Glu	Met	Phe	Ser	Trp	Glu	Arg	Leu	Gly	Glu	Asp	Glu	Glu	Glu	Leu
					785		790			795				Asn
Leu	Asp	Asp	Met	Glu	Lys	Met	Ser	Lys	Gly	Ser	Thr	Gly	Arg	Leu
				805					810					Arg
Ile	Arg	Gln	Ala	Lys	Leu	Ser	Gln	Ala	Gly	Ala	Tyr	Gln	Cys	Ile
			820					825					830	Val
Asp	Asn	Gly	Val	Ala	Pro	Ala	Ala	Arg	Gly	Leu	Val	Arg	Leu	Val
			835				840					845		Val
Arg	Phe	Ala	Pro	Gln	Val	Asp	His	Pro	Thr	Pro	Leu	Thr	Lys	Val
			850			855					860			Ala
Ala	Ala	Gly	Asp	Ser	Thr	Ser	Ser	Ala	Thr	Leu	His	Cys	Arg	Ala
			865			870				875				Arg
Gly	Val	Pro	Asn	Ile	Asp	Phe	Thr	Trp	Thr	Lys	Asn	Gly	Val	Pro
				885					890					Leu
Asp	Leu	Gln	Asp	Pro	Arg	Tyr	Thr	Glu	His	Lys	Tyr	His	Gln	Gly
			900					905					910	Val
Val	His	Ser	Ser	Leu	Leu	Thr	Ile	Ala	Asn	Val	Ser	Ala	Ala	Gln
			915				920					925		Asp
Tyr	Ala	Leu	Phe	Lys	Cys	Thr	Ala	Thr	Asn	Ala	Leu	Gly	Ser	Asp
			930			935					940			His
Thr	Asn	Ile	Gln	Leu	Val	Ser	Ile	Ser	Arg	Pro	Asp	Pro	Pro	Leu
				945		950				955				Gly
Leu	Lys	Val	Val	Ser	Val	Ser	Pro	His	Ser	Val	Gly	Leu	Glu	Trp
				965					970					Lys
Pro	Gly	Phe	Asp	Gly	Gly	Leu	Pro	Gln	Arg	Phe	Gln	Ile	Arg	Tyr
			980					985					990	Glu
Ala	Leu	Glu	Thr	Pro	Gly	Phe	Leu	Tyr	Met	Asp	Val	Leu	Pro	Ala
			995				1000					1005		Gln
Ala	Thr	Thr	Phe	Thr	Leu	Thr	Gly	Leu	Lys	Pro	Ser	Thr	Arg	Tyr
			1010			1015					1020			Arg
Ile	Trp	Leu	Leu	Ala	Ser	Asn	Ala	Leu	Gly	Asp	Ser	Gly	Leu	Thr
			1025			1030				1035				Asp

Lys Gly Ile Gln Val Ser Ile Thr Thr Pro Gly Leu Asp Gln Ala Pro  
                   1045                  1050                  1055  
 Glu Asp Thr Asp Gln Pro Leu Pro Thr Glu Gln Pro Pro Gly Pro Pro  
                   1060                  1065                  1070  
 Arg Leu Pro Leu Leu Pro Val Leu Phe Ala Val Gly Gly Leu Leu Leu  
                   1075                  1080                  1085  
 Leu Ser Asn Ala Ser Cys Val Gly Gly Leu Leu Trp Arg Arg Arg Leu  
                   1090                  1095                  1100  
 Arg Arg Leu Ala Glu Glu Ile Ser Glu Lys Thr Glu Ala Gly Ser Glu  
                   1105                  1110                  1115                  1120  
 Glu Asp Arg Ile Arg Asn Glu Tyr Glu Glu Ser Gln Trp Thr Gly Asp  
                   1125                  1130                  1135  
 Arg Asp Thr Arg Ser Ser Thr Val Ser Thr Ala Glu Val Asp Pro His  
                   1140                  1145                  1150  
 Tyr Tyr Ser Met Arg Asp Phe Ser Pro Gln Leu Pro Pro Thr Leu Glu  
                   1155                  1160                  1165  
 Glu Val Ser Tyr Arg Gln Ala Phe Thr Gly Ile Glu Asp Glu Asp Met  
                   1170                  1175                  1180  
 Ala Phe Pro Gly His Leu Tyr Asp Glu Val Glu Arg Val Tyr Gly Pro  
                   1185                  1190                  1195                  1200  
 Pro Gly Val Trp Gly Pro Leu Tyr Asp Glu Val Gln Met Asp Pro Tyr  
                   1205                  1210                  1215  
 Asp Leu Arg Trp Pro Glu Val Lys Tyr Glu Asp Pro Arg Gly Ile Tyr  
                   1220                  1225                  1230  
 Asp Gln Val Ala Ala Asp Met Asp Ala Gly Glu Pro Gly Ser Leu Pro  
                   1235                  1240                  1245  
 Phe Glu Leu Arg Gly His Leu Val  
                   1250                  1255

&lt;210&gt; 91

&lt;211&gt; 29

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Description of Artificial Sequence: Primer

&lt;400&gt; 91

gacctgtact tcatttttggg caaatcagg

29

&lt;210&gt; 92

&lt;211&gt; 34

<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Primer

<400> 92  
gagctcaaaa ttgagtggat gatgccttgc agag 34

<210> 93  
<211> 27  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Primer

<400> 93  
ggtaccactt ctctcaatcc aactttc 27

<210> 94  
<211> 49  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Primer

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gtccaaaatg aagtacaggt cagccaaact agtagagggtg aacaaaagc 49

<210> 95  
<211> 28  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Primer

<400> 95  
gggggacgca gggaggatgg ggggtccag 28

<210> 96  
<211> 30  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Primer

<400> 96  
gagctcccggt cagaacagtg tgtgggtggtg 30

ttt gaa agg gcc agt gag cag att tat tat gaa aac aga caa ggg tac 390  
Phe Glu Arg Ala Ser Glu Gln Ile Tyr Tyr Glu Asn Arg Gln Gly Tyr  
105 110 115

agg	aca	gcc	agc	gtc	atc	att	gct	ttg	act	gat	gga	gaa	ctc	cat	gaa	438
Arg	Thr	Ala	Ser	Val	Ile	Ile	Ala	Leu	Thr	Asp	Gly	Glu	Leu	His	Glu	
120					125				130						135	
gat	ctc	ttt	ttc	tat	tca	gag	agg	gag	gct	aat	agg	tct	cga	gat	ctt	486
Asp	Leu	Phe	Phe	Tyr	Ser	Glu	Arg	Glu	Ala	Asn	Arg	Ser	Arg	Asp	Leu	
				140					145						150	
ggc	gca	att	gtt	tac	tgt	gtt	ggc	gtg	aaa	gat	ttc	aat	gag	aca	cag	534
Gly	Ala	Ile	Val	Tyr	Cys	Val	Gly	Val	Lys	Asp	Phe	Asn	Glu	Thr	Gln	
			155					160					165			
ctg	gcc	cgg	att	gcg	gac	agt	aag	gat	cat	gtg	ttt	ccc	gtg	aat	gac	582
Leu	Ala	Arg	Ile	Ala	Asp	Ser	Lys	Asp	His	Val	Phe	Pro	Val	Asn	Asp	
			170				175					180				
ggc	ttt	cag	gct	ctg	caa	ggc	atc	atc	cac	tca	att	ttg	agc	tct	gct	630
Gly	Phe	Gln	Ala	Leu	Gln	Gly	Ile	Ile	His	Ser	Ile	Leu	Ser	Ser	Ala	
	185					190					195					
tcc	cca	acc	agc	cct	aag	gtc	ttc	cct	ctc	agc	ctt	gac	agc	acc	cct	678
Ser	Pro	Thr	Ser	Pro	Lys	Val	Phe	Pro	Leu	Ser	Leu	Asp	Ser	Thr	Pro	
200					205				210						215	
caa	gat	ggc	aat	gtt	gtc	gtt	gct	tgc	ctt	gtc	cag	ggc	ttc	ttc	cct	726
Gln	Asp	Gly	Asn	Val	Val	Val	Ala	Cys	Leu	Val	Gln	Gly	Phe	Phe	Pro	
				220				225							230	
cag	gag	cca	ctc	tct	gtt	acc	tgg	tct	gaa	tct	gga	cag	aat	gtt	acc	774
Gln	Glu	Pro	Leu	Ser	Val	Thr	Trp	Ser	Glu	Ser	Gly	Gln	Asn	Val	Thr	
			235					240					245			
gcc	aga	aac	ttc	cca	cct	agc	cag	gat	gcc	tcc	ggc	gac	ctc	tac	acc	822
Ala	Arg	Asn	Phe	Pro	Pro	Ser	Gln	Asp	Ala	Ser	Gly	Asp	Leu	Tyr	Thr	
		250					255					260				
acc	agc	tct	cag	ctc	acc	ctt	cca	gcc	acc	cag	tgc	cca	gat	ggc	aag	870
Thr	Ser	Ser	Gln	Leu	Thr	Leu	Pro	Ala	Thr	Gln	Cys	Pro	Asp	Gly	Lys	
	265					270				275						
tcc	gtt	acc	tgc	cat	gtt	aag	cac	tac	acc	aac	tcc	agc	cag	gat	gtt	918
Ser	Val	Thr	Cys	His	Val	Lys	His	Tyr	Thr	Asn	Ser	Ser	Gln	Asp	Val	
280					285					290					295	
act	gtt	cca	tgc	cgt	gtt	cca	cca	cct	cca	cca	tgc	tgc	cac	cca	cgt	966
Thr	Val	Pro	Cys	Arg	Val	Pro	Pro	Pro	Pro	Pro	Cys	Cys	His	Pro	Arg	
				300				305						310		
ctc	tct	ctt	cac	cgt	cct	gcc	ctt	gag	gac	ttg	ctc	ttg	ggc	tct	gaa	1014
Leu	Ser	Leu	His	Arg	Pro	Ala	Leu	Glu	Asp	Leu	Leu	Leu	Gly	Ser	Glu	
			315					320					325			
gct	aac	ctc	acc	tgc	acc	ctc	acc	ggc	ctc	aga	gat	gcc	tct	ggc	gcc	1062
Ala	Asn	Leu	Thr	Cys	Thr	Leu	Thr	Gly	Leu	Arg	Asp	Ala	Ser	Gly	Ala	
		330					335					340				

acc ttc acc tgg acc cca agc tct ggt aag agc gct gtt caa gga cca	1110
Thr Phe Thr Trp Thr Pro Ser Ser Gly Lys Ser Ala Val Gln Gly Pro	
345 350 355	
cct gag cgt gac ctc tgt gga tgc tac tct gtt agc tct gtt ctt cct	1158
Pro Glu Arg Asp Leu Cys Gly Cys Tyr Ser Val Ser Ser Val Leu Pro	
360 365 370 375	
ggt tgt gcc cag cct tgg aac cac ggt gag acc ttc acc tgc act gct	1206
Gly Cys Ala Gln Pro Trp Asn His Gly Glu Thr Phe Thr Cys Thr Ala	
380 385 390	
gcc cac cca gag ttg aag acc cca ctt acc gcc aac atc acc aag tcc	1254
Ala His Pro Glu Leu Lys Thr Pro Leu Thr Ala Asn Ile Thr Lys Ser	
395 400 405	
gga aac acc ttc cgt ccc gag gtc cac ctc ttg cca cca cca tct gag	1302
Gly Asn Thr Phe Arg Pro Glu Val His Leu Leu Pro Pro Pro Ser Glu	
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Phe Ser Pro Lys Asp Val Leu Val Arg Trp Leu Gln Gly Ser Gln Glu	
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Leu Pro Arg Glu Lys Tyr Leu Thr Trp Ala Ser Arg Gln Glu Pro Ser	
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Gln Gly Thr Thr Thr Tyr Ala Val Thr Ser Ile Leu Arg Val Ala Ala	
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His Ser Ile Leu Ser Ser Ala Ser Pro Thr Ser Pro Lys Val Phe Pro
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